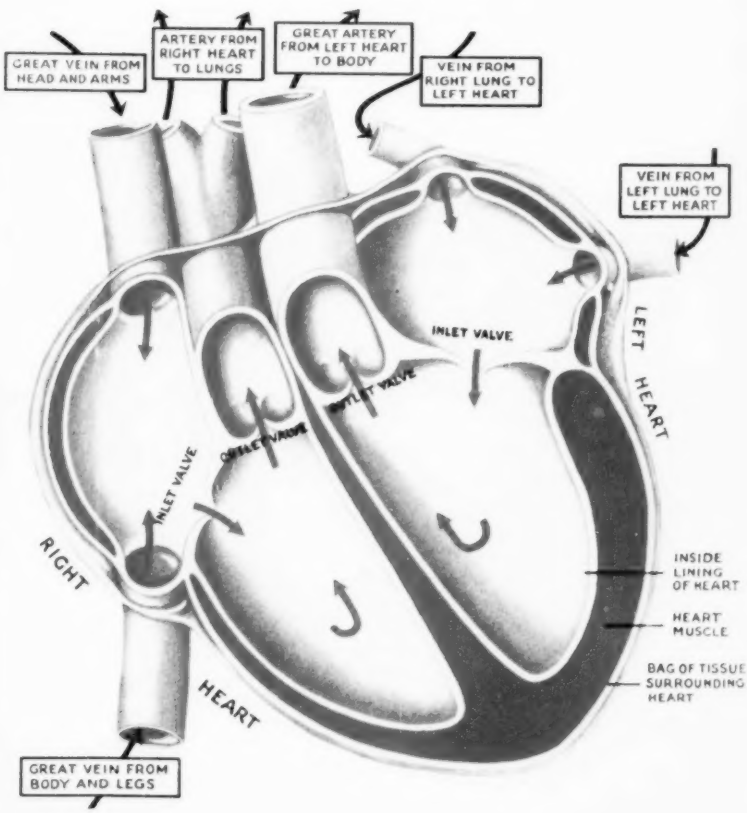
# Nursing World

FEBRUARY, 1953

## SPECIAL CARDIAC ISSUE

Trends in Cardiac Surgery
Myocardial Infarction
Aortic Grafts
Valvulotomy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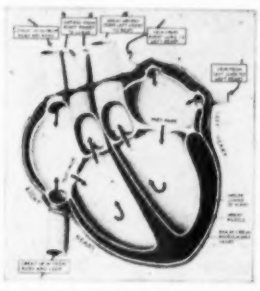

COVER: This drawing, courtesy of the Metropolitan Life Insurance Company, is not an exact representation of the heart in cross-section; but, rather, a pictorial diagram. Since this is "heart month," and since heart disease still remains a major health problem, we believe it to be an appropriate cover subject.


*Formerly Trained Nurse and Hospital Review which was first published in 1888.*


# Nursing World


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***Publisher***
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# In This Issue

LORRAINE HESLIN, R.N.

*For February's cardiology issue, Miss Lorraine Heslin, R.N., surgical department head at St. Vincent's Hospital, New York City, discusses the cardiac surgeon's latest advances in a guest editorial, page 9. A graduate of the school of nursing at St. Vincent's Hospital, she received her B.S. degree in nursing education from Catholic University School of Nursing, Washington, D. C., and her M.A. degree from New York University's School of Education.*

*Next month,* Nursing World *will present the current picture in psychiatric nursing. The guest editorial on mental health will be written by Miss Annie Laurie Crawford, R.N., Supervisor of Psychiatric Nursing Services for the State of Minnesota, and a member of* Nursing World's *Advisory Board.*

JEANNE COLT, R.N.

*Jeanne Colt, R.N., contributes to the cardiac issue a description of nursing care for patients with aortic grafts, page 12. She is supervisor and clinical instructor in the surgical specialty division of the Children's Medical Center, Boston, Mass. A graduate of the Children's Hospital School of Nursing, she was formerly staff nurse and head nurse in that hospital's communicable disease division. Her educational background includes attendance at the University of New Hampshire and Boston University.*

ROSE P. McKAY, R.N.

*Rose P. McKay, R.N., explains the importance to industry of a pre-employment physical examination for all workers, page 24. An employee of the New York City Department of Health, she works in the Bronx with communicable diseases, polio, child health care, foster homes, etc. A graduate of the College of Mt. Saint Vincent School of Nursing, Riverdale, N. Y., she will receive her M.A. degree in public health nursing this month from Teachers College, Columbia University.*

HOWARD L. JOHNSON

*Howard L. Johnson, principal of the Emily Griffith Opportunity School, Denver, Colorado, offers his proven method for publicizing practical nurse training on page 30. His school is the adult education branch of the Denver public school system, providing a variety of career courses.*

ANNE JORDHEIM, R.N.

*Mrs. Anne Jordheim, R.N., now living in Oslo, Norway, writes on page 32 of the Norwegian practical maternity nurses who attended her when her child was born recently. Her own experience in maternity nursing includes service at Woman's Hospital, N. Y. C., Lying-In Hospital, Chicago, and Jefferson Medical School, Philadelphia, where she worked before moving to Norway. A graduate of St. John's Riverside Hospital, Yonkers, New York, Mrs. Jordheim received her B.S. degree in teaching and supervision of maternity nursing, and her M.A. degree in health education, from Teachers College, Columbia.*

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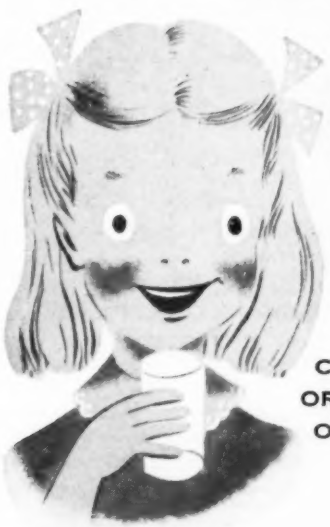

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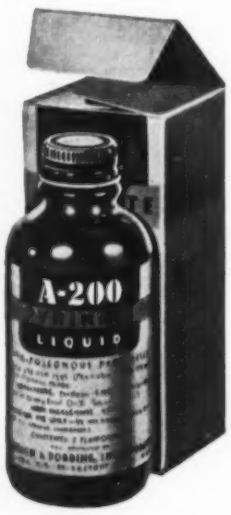


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# News for Nurses

### Program Meetings for All Nurses Planned For the 1953 NLN Convention

Outstanding program meetings of interest to all nurses in all fields and positions and to other public-spirited citizens are being planned for the 1953 Convention of the National League for Nursing. This will be held at Cleveland, Ohio, June 22-26. The theme will be "Concerted Action to Meet the Nation's Nursing Needs."

Advance registration forms will be sent to all NLN members in February. Others who plan to go to the convention may register early by writing to the National League for Nursing, 2 Park Ave., New York 16, N. Y. Registration fee will be $5 for NLN individual members, $6 for those who are not members. Advance registration will end May 16.

### "Preparing Tomorrow's Nurses"— A New Question and Answer Pamphlet by NLN

Here, for the first time, is a pamphlet on nursing education specifically written for the layman. It presents information about nursing service today, asks questions about education for both professional and practical nursing; indicates some of the shortcomings in the preparation of the present-day nurse; and suggests what the nursing profession and the public can do together to help correct these shortcomings and make certain that nurses are competent for the trust the public puts in them.

The pamphlet also describes the enlarging scope and increasing complexity of nursing and the changing patterns of nursing services. It traces the history of schools of nursing in the United States, and explains why student nurses should be given a real education if they are to become the well-prepared nurses so urgently needed.

Copies of the pamphlet may be ordered from the National League for Nursing, 2 Park Ave., New York 16, N. Y.

### Promotional Opportunities Offered Nurses By Illinois Civil Service Commission

A severe shortage of Nurses I and II still exists in several Illinois state hospitals. Candidates for Nurse I and II do not have to appear for an examination. They need only to submit an official application form, from which the Commission rates their training and experience, and proof that they possess a valid license. Illinois residence is not necessary. This employment offers excellent promotional opportunities.

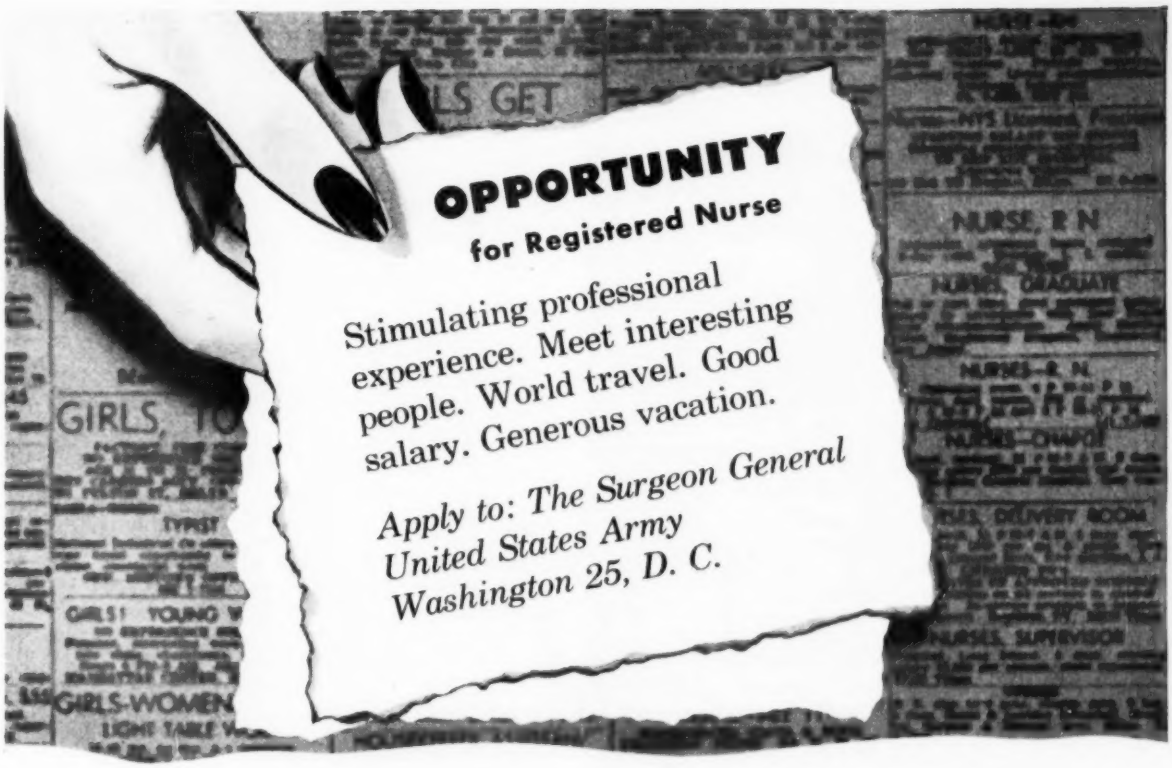
Additional information and application forms may be obtained from the Civil Service Commission, Armory building, Springfield.

### Announcement

The American Association of Medical Record Librarians will hold a convention in San Francisco, California, at The Palace Hotel, October 5-9, 1953.

### Announcement

An Institute on Audio-Visual Aids in Clinical Teaching will be sponsored by the Department of Nursing Education of De Paul University, Chicago, on March 5th and 6th at the La Salle Hotel. Commercial and nursing school exhibits of audio-visual aids will be included. For applications write: Mrs. Florence Finette, Chairman, Department of Nursing Education, De Paul University, 64 East Lake Street, Chicago 1, Illinois.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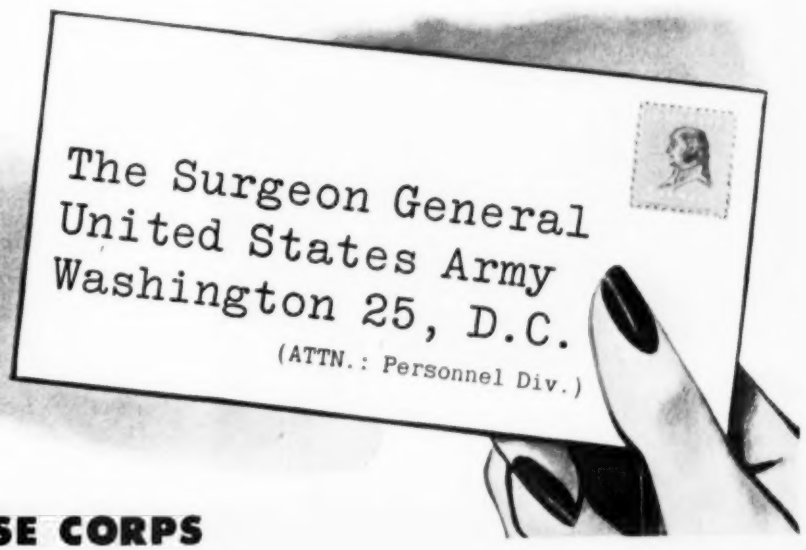


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Guest Editorial

# Trends in Cardiac Surgery

*by* ***Lorraine Heslin, R. N.,*** *Surgical Department Head, St. Vincent's Hospital, New York City*

MUCH has been accomplished in the past to set the stage for greater advancement in cardiac surgery. That which has achieved success is already surgical history, but changes are presently in vogue to further evaluate and, if possible, improve techniques that are well established.

Diagnostic measures are being developed that will facilitate quicker and more explicit clinical diagnosis. This is particularly true in the improvements in angiocardiography, whereby direct visualization of the heart and great vessels is obtained following the very rapid injection of a quantity of radiopaque solution. This particular technique has been a valuable aid in diagnosing congenital malformations of the heart. In some instances, it has eliminated the necessity of exploratory operations, by providing specific information beforehand. The procedure itself, however, is not without its hazards. It must be performed by a skilled radiologist and with due concern for the patient's status before the procedure is attempted. The solutions that are commonly used are diodrast, skiodan and sodium iodide solution.

Cardiac catheterization is, likewise, a procedure that plays an important role in the diagnosis and evaluation of cardiac conditions. It consists of the insertion of a radiopaque cardiac catheter into an accessible vein—usually the antecubital or basilic vein. The fluoroscope constantly shows the catheter's position and follows its course into the heart and pulmonary artery. All positions of the catheter are recorded by x-ray Samples of blood to be tested for oxygen are taken, as well as pressure readings of the various chambers of the heart. In a congenital septal defect, the catheter might pass through into the left side of the heart. If the left side of the heart is to be investigated, an arterial approach is necessary. An electrocardiogram is taken during the procedure as well as electrocardiotachometer readings, which record the heart beat.

To date, the greatest surgical advances have been made in the treatment of congenital cardiac defects. These include patent ductus arteriosis, pulmonary stenosis, coarctation of the aorta, and some aortic arch anomalies. More recently the attack has spread to the relief of cardiac valvular diseases with emphasis on mitral stenosis.

The procedures used in correcting the defect of patent ductus arteriosus vary only slightly since it was first performed in 1938 by Robert Gross. The difference is merely one of decision as to whether the ductus should be divided and the two ends closed, or whether it should be undivided and closed by multiple suture ligatures. In each instance, the shunt of blood from the pulmonary artery to the aorta is halted and the defect corrected.

In treating pumonary stenosis, the surgeon encounters a situation where the stenosis might be a single defect, or it may be associated with other anomalies such as in the "Tetralogy of Fallot." At present, some of the authorities feel that a direct attack on the stenosis should be the method of procedure wherever possible. Where this cannot be done, the anastomatic procedures will bring relief to the patient and the pulmonary circulation will be improved. The original defect, however, still remains and eventually there may be a recurrence of symptoms. In these operations a systemic-pulmonary anastamosis is made which permits inadequately oxygenated blood to be brought back to the lungs, thereby relieving the cyanosis and the disability of the patient.

Coarctation of the aorta, whereby there is a narrowing or stenosis of the aorta, is responsible for a particular type of hypertension. It is one of the few types that can be remedied by surgery. Resection of the stenosed section of aorta relieves the condition. In most cases, an end-to-end anastamosis of the aorta is done. This particular surgical procedure was first successfully demonstrated in 1945. In some instances, homografts have been used, and in the infantile type the left subclavian artery is used to bypass the stricture. It is anastamosed to the distal end of the aorta.

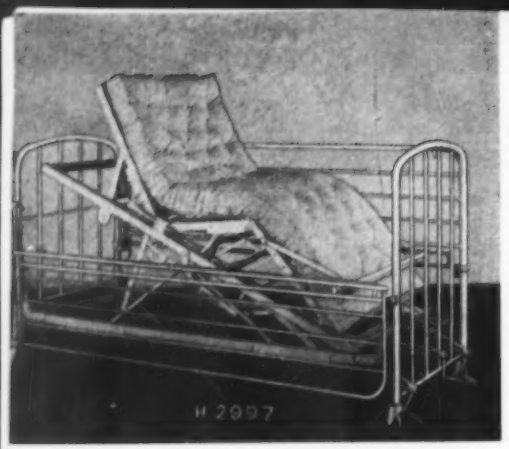
Another procedure that is being used at the present time is commissurotomy for the relief of mitral stenosis. This is performed by "digital vision." The surgeon's gloved finger is inserted into the left auricle by way of an opening in the auricular appendage. A purse string suture controls blood loss. An attempt is made to fracture the commissures with the finger, but if this is not possible the commissures are cut. This is accomplished by the use of the special commissurotomy knife which the surgeon holds in place on the palmar surface of his hand and index finger by a double glove arrangement. After the commissures are cut, the finger and knife are removed and the wound is closed.

The operations mentioned so briefly here are only a few of those performed in cardiac surgery. Research is constantly going on to develop superior techniques. Much is available now to aid this important work, and it is being utilized to its fullest extent. Not only has angiocardiography and cardiac catheterization aided in diagnosis, but the advances in anesthesia have made it possible to carry out these delicate surgical procedures. Endotracheal anesthesia has been responsible for great strides here, as in all thoracic surgery. Further advances in refrigeration anesthesia are, likewise, making more extensive surgery possible. It does not seem too far in the future before the greatest of all difficulties may be surmounted with the rechanneling of the circulation to permit cardiac surgery under direct vision.

What do these strides mean to the nurse and where does her responsibility lie in dealing with patients undergoing cardiac surgery? Of necessity, it means that the nurse must understand the pathology present in the patient and the type of surgery performed if she is to give intelligent nursing care. The psychological and emotional factors must be dealt with carefully in both the preoperative and postoperative periods. There is still no logical explanation for the transcient depression that follows in many cases of cardiac surgery, but the nurse should anticipate it and help to guide the patient through this period. Not only may he be depressed, but ill-humored, nervous and apprehensive as well.

During the post-operative period, a nurse should be in constant attendance for the first twenty-four to forty-eight hours or longer, if necessary, depending on the operative procedure. She must be on the alert for any changes in the patient's blood pressure, pulse, respiration or temperature that would be indicative of shock, auricular fibrillation, or respiratory complications. Caring for these patients presupposes a thorough knowledge of techniques of oxygen therapy, the principles and care involved in underwater drainage and all of the specific postoperative measures in all thoracic surgery.

As the surgeon and anesthetist are constantly advancing in their search for better techniques and greater skills, so must the nurse continue to increase her knowledge and skill along similar lines. By so doing, she maintains her place in the professional team that is ever working for the maximal benefit of the patient.




The Johns Hopkins Cardiac Bed in chair position.

# Nursing Care of Patients with Myocardial Infarction

WITH the advent of increased longevity in our present society, medical problems concerned with the biological process of aging have come increasingly to the fore. Of these problems, those of cardiac disease rank among the most important. Since it has been estimated that 800,000 attacks of myocardial infarction occur in this country every year, the importance of nursing care of these patients cannot be overestimated.

Because of advancing knowledge, it is desirable to use the term "myocardial infarction" rather than the more common terms of coronary occlusion or thrombosis, as these terms are used to amplify the diagnosis by qualification. The important aspect with which we are concerned is whether or not actual infarction has occurred, not that it resulted from coronary thrombosis or prolonged myocardial anoxia.

Immediately after diagnosis has been established, treatment and nursing care of the patient must be planned in an orderly, individualized fashion. The nurse must, first of all, possess a basic knowledge of the cause, symptoms and treatment of the disease, and then understand the relationship of these aspects to the individual patient. It must be remembered that, though we speak of the care of patients with myocardial infarction, no two patients are alike and intelligent nursing care contributes significantly to the patient's well-being.

If the damage to heart muscle is sufficiently extensive, the heart may be unable to supply an adequate amount of blood to the systemic circulation and shock will result. In other instances, inability of the heart to eject all the blood returned to it through the venous channels may lead to congestive failure in pulmonic or systemic circulation. In either circumstance, the therapeutic problem posed is that of lightening the burden upon a damaged and less efficiently functioning heart.

One of the first considerations in care is that concerning the patient's activity. Ordinarily, it is considered that demands placed upon the heart are least when the patient lies flat. But this encourages pooling of fluid in the pulmonary circuit and, as this disease affects highly active and previously healthy persons, this position saps morale, unleashes anxiety and ushers in hopelessness. The sedentary position with the feet down, afforded by the cardiac bed, permits gravity to mobilize fluid into the dependent parts of the body, relieves dyspnea, and enhances the sense of well-being. It is well to note that no rigid preconceptions concerning the position of the patient should be adhered to; rather, the patient should be allowed to assume a position most comfortable to him. Reduction of physical activity to the very minimum involves considerable effort in planning nursing care. Though the physician prescribes absolute bed rest, it is the nurse who aims to achieve this rest for her patient. It must be remembered that the patient cannot be forced to rest; teaching should be directed toward making him want to rest by helping him to understand and accept the importance of rest on an intellectual as well as on an emotional level. The plan must be so formulated that he is not constantly disturbed for medicine and treatments and that he has definite periods of rest. To avoid all possible means of exertion on the part of the patient the nurse must learn to anticipate his wants and needs. When it is necessary to move or turn him, enough assistance must be available so that it can be done without effort on his part. In addition to reduction of physical activity, it is essential to provide mental tranquillity. Disturbing and unlimited visitors must be avoided; religious ministration should be provided or avoided depending upon the obvious desire of the patient. An attitude of cheerful confidence by those ministering to him will do much to allay anxiety and its attendant demands upon the heart.

The relief of pain in the acute stage is another important aspect of care. The sometimes excruciating pain and associated anxiety are relieved by analgesics; those most widely used being opiates and demerol. Both the dose and frequency of administration must be carefully watched; overdosage is indicated first by depressed respirations. Another measure to decrease the load on the heart, to overcome dyspnea and relieve pain, is oxygen. This may be administered in increased concentration by mask, catheter or tent. It is important that the nurse

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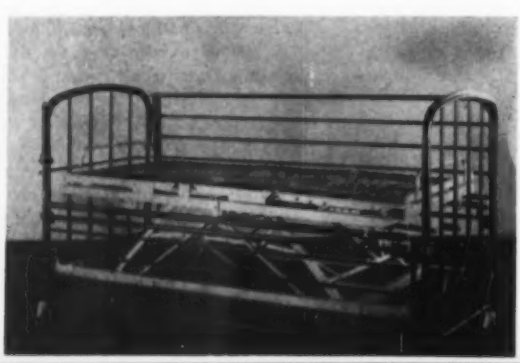

Left: Flat

Right: Regular gatch

understand the mechanism of administration and to know the apparatus is functioning properly. Vasodilators, such as papaverine or aminophylline may be used to relieve pain by the dilating effect on the coronary arteries.

After the initial pain has subsided, opiates are discontinued and patients sedated with barbiturates. Although barbiturates are widely administered to reduce excitability and control anxiety, it is well to remember that in some elderly patients and those with cardiac insufficiency the administration of these drugs may be followed by excitement or delirium.

Frequent and attentive observation of the patient are of great importance in the successful management of the patient. Both the rate and rhythm of the pulse and respirations are of prognostic significance and should be carefully observed and recorded. Cyanosis, sweating, pallor, and precordial pain should be brought promptly to the attention of the physician. The temperature is recorded periodically, preferably by oral measurement, as rectal stimulation and movement of the patient increase cardiac activity. Slight elevation of body temperature is expected during the first few days of illness, but a persistent fever is prone to occur with the larger infarcts of the myocardium. The recording of the blood pressure from the first few hours through the second day after infarction is of particular importance in determining whether or not the patient is in danger of shock.

THE dietary regimen, with maintenance of caloric intake, is of secondary importance in the acute stage, and need not occasion great concern. A simple one gram sodium diet used in this stage is the Karrell Diet, consisting of 200 cc of milk four times daily. As digestion of food entails work and high-to-normal sodium is not indicated in presence of actual or impending heart failure, this diet is of value over short periods of time. Later, the Karrell Diet is replaced with one suitable to the patient's needs and condition. The diet should be simple, given in frequent small feedings, readily digestible and one which does not cause gaseous distention. Patients who are overweight should receive a low calorie diet; diabetics should continue their diet to avoid hypoglycemia that can be fatal with insufficiency. It is suggested by some that patients in the chronic phase be placed on a low cholesterol diet because of the influence of cholesterol on the rate of development of arteriosclerosis. Iced drinks must be avoided in all cases, inasmuch as their administration may be attended by vasomotor responses. It is generally considered that tobacco should not be used, or at least not to excess by those patients who are made more anxious and nervous by withdrawal. In considering the function of the gastro-intestinal tract, attention to the regulation of bowels is also important. Though it is not important that a patient have a bowel movement during the first two days following the infarction, it is important that severe obstipation, followed by fecal impaction be prevented. Mild laxatives are usually administered; small cleansing or oil-retention enemata are tolerated and effective in relieving constipation. Straining at stool is to be avoided and may result in fatal collapse. Many consider the use of the bedside commode causes less strain on the patient than the use of the bedpan. However, it may be necessary to lift the patient in and out of bed.

Fluid balance should be carefully observed, especially during early phases of illness. If there are indications of limited cardiac reserve, fluid intake will be restricted. The careful recording of urinary output assumes added significance because, in a patient too ill to be weighed, it provides information relative to whether or not he is retaining fluid.

The care of the skin is of utmost importance, as these patients may remain in bed for long periods of time, often in the same position, and because the circulation is impaired and edema is often present. These conditions may contribute to the development of pressure areas.

Following the initial period, after the onset of the attack, pain usually subsides within twelve to twenty-four hours and care is largely symptomatic. However, nursing surveillance must be continued throughout the following three weeks, for the majority of complications occur during this period. Though the patient looks and feels well, he may develop serious complications.

In the presence of cardiac failure with evidence of pulmonary congestion, physical means such as venesection or dry phlebotomy are employed to control volume and distribution of blood in the vascular bed. Tourniquets are applied at a pressure not exceeding that of diastolic blood pressure and should be applied to three extremities, rotated at fifteen-minute intervals. In congestive failure, fluid may extravisate and accumulate in the pleural cavity, bringing embarrassment to respiratory exchange. This fluid may be used to reduce edema. Digitalis, commonly used in combating congestive failure, is not used without hazard here. The hyperactive myocardium will be heightened in excitability by the digitalis and may lead to ventricular fibrillation and death.

EMBOLISM may occur at any time after the initial attack. It must be remembered that emboli may come from either the right or left ventricle and cause a variety of symptoms dependent upon the area or organ involved. With the approval of the physician, patients may exercise calf muscles and press feet against footboards to aid in venous return and prevent stasis. Immediate treatment consists of keeping the patient quiet, administering opiates as ordered and, if there has been a pulmonary embolism, the administering of oxygen. Dicumerol has been advocated to prevent the development of thrombi in leg veins of an inactive patient and of thrombi at the site of myocardial injury. This drug acts to prolong the coagulation of the blood. Tromexan has been tried; it is believed to be not as effective as dicumerol. Heparin is used in some areas during the initial twenty-four to forty-eight hours because of the slow onset of action of dicumerol. Because of the action of these drugs, it is important that the nurse carefully observe the patient for any bleeding tendency; especially so when the patient receives heparin.

Other complications include auricular fibrillation, which may be recognized by rapid pulse rate with increased pulse deficit. This is treated with digitalis to block the conduction between the fibrillating auricle and ventricle. Paroxysmal ventricular tachycardia will be forecast with sudden increase of heart rate above

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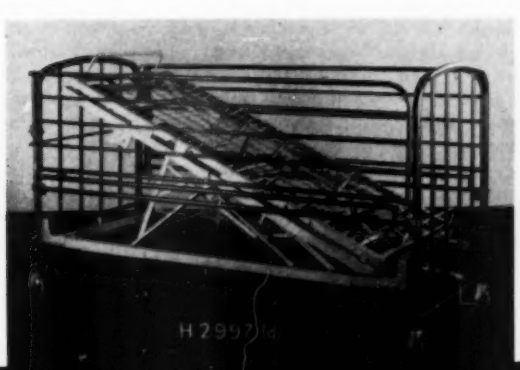
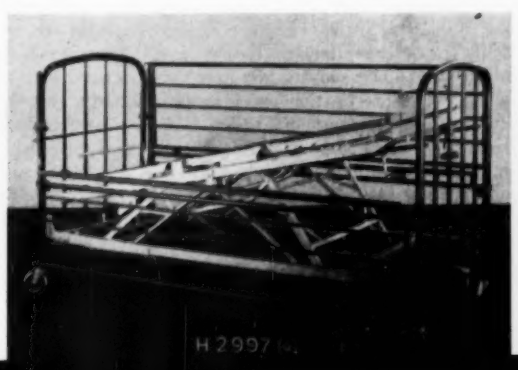
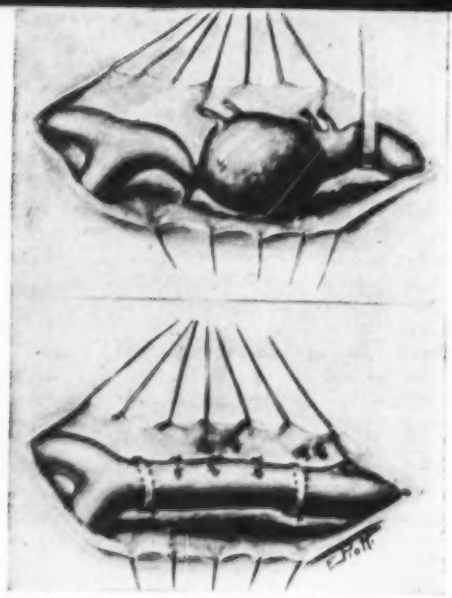


Left: Fowler or Shock

Right: Trendelenberg





Top: Coarctation of the aorta with a large aneurysm just below the narrowed area.
Bottom: Coarctation and aneurysm have been excised and graft is in place.



*Illustration (left) reprinted from "Treatment of Certain Aortic Coarctations by Homologous Grafts: A Report of Nineteen Cases," by Robert E. Gross, M.D., Annals of Surgery, 134:753, Oct. 1951.*

# Care of the Patient with an AORTIC GRAFT

*by* ***Jeanne Colt, R.N.,*** *Supervisor and Clinical Instructor Surgical Specialty Division, Children's Medical Center, Boston, Mass.*

WITHIN the last four and one-half years surgical treatment of coarctation of the aorta has been advanced by the development of a technique involving the use of homologous grafts. Today successful treatment is available to patients who formerly would have been considered inoperable. At The Children's Medical Center, Boston, Massachusetts, the records show that approximately forty patients have thus far had excision of coarctation of aorta with the insertion of a graft; to date the results appear to be very satisfactory. Many of the patients operated upon in 1948 and in succeeding years are in excellent health today; however, no final conclusions can be reached until these patients have been followed for many years.

Certain techniques of care must be understood by the nurse who hopes to give these patients intelligent and skillful nursing. A comprehension of what is meant by "coarctation of the aorta" and its surgical treatment is essential.

The anomaly, coarctation of the aorta, can be defined as a narrowing or complete obstruction of the aorta at or about the level of the ductus arteriosus or its obliterated remnant. The condition, which occurs twice as often in the male as in the female, is not incompatible with life. Many persons, about one-fourth of all those affected, may live relatively normal lives with little difficulty; most patients are asymtomatic until they reach adolescence. The sign usually first noted is hypertension in the arms resulting from aortic obestruction; this is often discovered at a routine physical examination, the patient having had no previous complaints.

The blood pressure in the upper extremities may be only slightly elevated or there may be a marked rise. The leg pressures, which normally are 20 to 40 millimeters of mercury higher than those of the arms, are found to be low, or even entirely absent. Most patients do not appear to suffer markedly from the lowered pressure in the lower part of the body. Collateral channels develop whereby the blood from the arch of the aorta is rerouted to the descending aorta below the obstruction. Some patients do complain of coldness of the feet and some have slight tingling sensations, but no serious disability occurs.

Difficulties which these patients encounter as they grow older are due to the extreme hypertension of the upper part of the body. There is an added load on the heart and in later life death from heart failure may occur. Intracranial hemorrhage is another possibility.

Most patients can withstand surgery if none of the following serious contraindications is present:

1. Rheumatic mitral disease of a marked degree
2. Aortic valve regurgitation of serious extent
3. Conduction bundle defects (by EKG)
4. Advanced myocardial damage.

The optimum time for surgery is between ten and twenty years of age. By this time the vessel is sufficiently large so that the operator may work on it with some ease; it is still elastic and has had little or no degenerative change. The resulting lumen will be large enough to prevent recurrence of the hypertension. In a younger child the lumen may not be large enough to serve through adult life. If surgery is postponed to later life, the patient will have a lower heart reserve, larger chest, less elastic aorta, and aneurysms of the aorta above or below the coarctation are more frequent.

Whenever possible, the operation consists of an excision of the narrowed portion of the aorta with direct anastomosis of the upper and lower segments. This procedure is carried out through a large incision the entire length of the fourth interspace with division, at the back, of two ribs above and two ribs below the incision.

In certain patients, however, conditions exist which make necessary the use of a graft. Prior to the development of the technique for using grafts, these patients often were subjected to a long exploratory procedure, with a disappointing outcome. The conditions in which the use of a graft are indicated are:

1. A long section of narrowed aorta.
2. A rigid and inelastic aorta.
3. An aneurysm above or below the coarctation.

The specimens for grafts are collected, preferably from young individuals within four to six hours after death. They may be stored in any one of several ways; the preferred method is to gather the secimens aseptically and store them in a modified Tyrode's fluid at a temperature of 3 or 4 degrees C. On many occasions it seems preferable to freeze grafts (at —50° C.) because they can be kept longer by this method.

The patients who come into the hospital for treatment of coarctation of the aorta are admitted with the diagnosis already made and many arrive on the day before surgery. The surgeon will have discussed with each patient and his family the hazards of the procedure and will have told them about the possibility of using a graft.

It is preferable, but not always possible, to have the patient in the hospital for a day or two before surgery is planned. This gives him an opportunity

to become adjusted to his surroundings and to the people who will care for him. Since he is not ill, he is allowed up and about the division, which provides opportunity for orientation in the physical set-up and is helpful in his adjustment.

While apparently calm, the person preparing for heart surgery is in most instances quite apprehensive. If he is an adult, he probably understands quite thoroughly the condition from which he suffers and he may even have had previous surgery which was disappointing in its results. If the latter is true, he may be pleased the the possibility of having a complete recovery from this new method of surgery; many adult patients have known about the grafts before coming to the hospital and look upon them as a boon. The adolescent patient will probably tend to appear confident and calm; but he may, in actual fact, be very much worried about the whole matter. His understanding of it may not be as complete as is the adult's and he may fear the consequences of surgery as far as his physical well-being is concerned. If the patient is a child, which is rarely the case, the usual consideration for his emotional reaction to surgery is essential.

The preoperative measures which are necessary for these patients are for the most part those planned for any patient prior to surgery. The usual routine procedures are done, including necessary laboratory studies of blood and urine. The skin preparation for older patients includes a shave of the entire left chest, axilla and also the left ankle in preparation for the insertion of a constant intravenous. The chest is further prepared by scrubbing with Phisohex[1] on the evening prior to surgery.

A necessary procedure is the taking of blood pressure on all four extremities and the recording of these pressures on a special chart which is kept throughout the period of hospitalization. This provides an easy comparison of the preoperative and postoperative readings.

Preoperative medications are not unique in any way. It is important that the patients have a good rest the night before operation and that they be quite drowsy in the early morning since this will allay a great deal of apprehension. Nembutal is used in suitable doses as sedative, and morphine sulphate and atropine sulphate are given in the morning prior to operation.

Since the operation procedure is a lengthy one, usually of four to six hours' duration, the patient goes to the operating room at an early hour in the morning. He receives no fluid by mouth for at least six hours prior to the scheduled time of surgery. To supplement body fluids an intravenous infusion is started in the left arm at about six o'clock on the morning of operation and a second constant intravenous via a venesection is established in the left angle. Through the first intravenous the anesthetist gives a small dose of Sodium Pentothal prior to the administration of ether, which is the anesthetic of choice. These two intravenous routes are used during the operation and one of the two is kept open throughout the immediate postoperative period, the arm needle being removed at the conclusion. During the operation the considerable blood loss is measured and replaced and it has been found safer to have two routes for administration.

Postoperatively the patient remains on the operating table until the doctor considers it safe to move him. At that time he clamps the chest suction and assists with the moving of the patient. In the immediate postoperative period, while the patient remains in the operating room, a nurse is in constant attendance and is responsible for postoperative procedures which essentially are not different from those for any other patient who has undergone chest surgery. Vital signs must be checked frequently and any sudden or marked variation reported. It is of interest that pressures will appear quite promptly in the lower extremities and arm pressures will drop, but it will usually take two to three weeks for these pressures to reach normal range. The nurse also will be responsible for observing the dressing for staining as evidence of any bleeding, for frequent checking of the constant intravenous and for maintenance of adequate airway.

At the conclusion of the operation, water seal drainage with mild suction is instituted. This is supplied by the use of a collection bottle in which a partial vacuum is created by connection to a wall suction outlet. The suction is reduced by the use of a simple regulator, the setting of which is the responsibility of the doctor. After the chest suction is set up, all joints are taped securely as an added precaution against accidental separation. Two clamps are kept with the regulator at all times for the use of the surgeon and also as a safety measure in the event the patient must be moved unexpectedly. Both clamps could be applied to the tube and the tube cut to facilitate moving.

The responsibility of the nurse in regard to the chest suction includes making sure that the tubing lies freely without kinks or strains, that there are no interruptons in the system and that the regulator is checked at frequent intervals and variations reported.

The patient will receive prophylactic antibiotics, streptomycin and penicillin being given intramuscularly starting immediately after operation; and sedatives

The postoperative patient with the chest suction apparatus, including the regulator.

should be started before the patient is well awake, provided his vital signs are within normal limits.

At operation, a Foley catheter will be inserted so that the necessity for catheterization postoperatively will be avoided. This constant urinary drainage will be continued for three to four days. An accurate record of output should be maintained.

Because of the necessary replacement of large quantities of blood, the patient's red blood count and hemoglobin will be checked while the patient is still in the operating room.

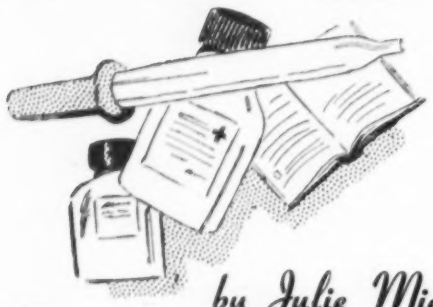
The patient may be returned to his room in six to eight hours following conclusion of surgery. When he is comfortably settled, members of his family may be allowed to visit him; this reassures them as well as the patient. Continuous nursing care is desirable for the next twenty-four to forty-eight hours depending upon the patient's condition, and also upon his psychological state. Many of these patients, while not requiring constant attention, benefit greatly from the presence of a nurse.

At this stage, the comfort of the patient is of prime importance. There is a great deal of pain in the chest and when a graft has been used it is advisable to keep the patient quiet and prevent restlessness. Therefore, morphine sulphate, the drug most commonly used, should be given about every four hours during the first few days and at gradually increasing intervals for about five days in all. After this period, codeine and aspirin are given by mouth continuing up to the time of discharge.

During the surgical procedure, four or five cubic centimeters of nupercaine in oil are injected around each of the upper six or seven intercostal nerves. This infiltrates the tissues between the

(*Continued on page 36*)

[1]*Phisohex, formerly Phisoderm with Hexachlorophene, is an antibacterial sudsing fluid cream.*



# Advances and Trends in Drugs and Procedures

by Julie Miale, R.N.

PERIPHERAL vascular diseases affecting the blood supply to the extremities, either organic or functional in origin, constitute one of the important problems in medicine today.

The importance of complete vascular appraisal is being emphasized. Nurses in many instances must assist in the preparation of the patient and in carrying out these diagnostic procedures. Among the various diagnostic tests used to establish the correct status of the circulation in a part or in the whole body are the Oscillometer readings and the Thermacouple for the determination of skin temperature. Among the treatments sometimes used in vascular diseases are the sympathetic nerve blocks, vascular packs and vascular soaks. These technics will be described briefly.

## OSCILLOMETER READINGS

An oscillometer machine consists of a pneumonic cuff connected by rubber tubing to a recorder with a sensitive diaphragm. Pulsations against the cuff transmit pressure which moves the needle across a dial, measuring in units the oscillometer index. There are different types of oscillometers on the market and different machines may show considerable variation in response to a given pulsation. The operator should be familiar with the type of machine in use in order to evaluate accurately the patient's condition. It is important that oscillometer readings be performed in a warm room because vasospasm of the arteries, caused by chilling, may alter the readings.

**PROCEDURE:**

**PURPOSE:** To determine the degree of circulation in circulatory pathology and to evaluate the effect of drugs or treatments on the circulation.

**EQUIPMENT:** (1) Sphygmomanometer and stethescope; (2) Oscillometer machine; (3) Pencil and paper.

**PREPARATION OF THE PATIENT:** Explain the procedure to the patient. (1) The patient's body is exposed in a warm room (70-75 F.) for at least one half hour prior to the test. If he comes in from out of doors and is chilled, he should be wrapped in blankets to avoid the effects of chilling; (2) Place the equipment on the bedside stand; (3) The doctor performs the test, by taking readings at the mid thigh, upper third of leg, above the ankle, foot, upper arm, elbow, wrist and hand; (4) At the completion of the test, make the patient comfortable.

## THERMACOUPLE

The determination of the surface temperature contributes important evidence for the establishment of a diagnosis in peripheral vascular disease. Surface temperature can be obtained through relatively simple tests performed by the clinician. However, various aids for determining more accurately the surface temperature have been developed. Observations may indicate organic occlusive disease when one or two fingers or toes, for instance, are cooler than other digits of the same extremity; or when the temperature of one extremity may be much lower than that of its counterpart, even though both have been exposed to the same environmental states. The skin temperature is not a measure of total volume of blood flow to the extremities, but only an index of the blood flow through the skin and subcutaneous tissue.

**PURPOSE OF THE TEST:** As a diagnostic technic, to determine the skin temperature of an extremity where there is circulatory pathology; and to evaluate the effect of drugs or treatments on the circulation of an extremity.

**EQUIPMENT:** Potentiometer, Thermacouple machine, pencil and paper.

**PREPARATION OF PATIENT**

**PROCEDURE:** (1) Explain the procedure to the patient; (2) Close the windows of the room—maintain temperature (70-75 F.); (3) Place the patient in a dorsal recumbent position. Uncover the patient's extremities to be tested and leave in this fashion for ½ hour before the test; (4) Place the equipment at the bedside; (5) The test is made by the physician after exposure time of ½ hour. The potentiometer indicates the temperature of the skin in degrees of Fahrenheit or centigrade, directly following the application of the thermacouple to the skin.

## SYMPATHETIC NERVE BLOCK

Sympathetic nerve blocks are done to overcome arterial spasm, in arterial occlusions, thrombophlebitis, causalgia, and as a test before permanent sympathectomy. Spasms of the arterial supply are important, whether caused by a sudden loosening of a large plaque which closes off the circulation, as in arteriosclerosis, or by the lodgement of an embolus. A severe spasm may mean life or death of a part. Therefore, interruption of the machanism is very important and the elimination of the vasospasm is necessary.

This procedure, always carried out by the physician, consists of the introduction of a needle and injection of an anesthetic solution into, or in close proximity to, a ganglion, to produce an interruption of the sympathetic pathways for a variable length of time. While this procedure produces a temporary effect, it may be enough to reduce the spasm and carry the patient over a very difficult period. The interruption may last as long as seven days.

**PRATT'S* TECHNIQUE**

The patient is placed on his abdomen, with a pillow between the crest of the ilium and the lower ribs to straighten the lumbar curve of the spine. The first, second, third and fourth lumbar spines are marked with methylene blue or some other dye. Other marks are placed exactly 4 cm. lateral to the intra-spinous space. This point is selected because, in the lumbar area, the transverse processes are opposite the spines. With this technique, the transverse processes are avoided. Therefore, the intra-spinous spaces are selected.

Usually a spinal needle 9 cm. long is used. The needle is introduced for the distance of 4 cm., or about ½ the length of the spinal needle. Then, the needle is angled slightly and introduced another 4 cm., leaving approximately 1 cm. of needle protruding. The other needles are introduced in a

*Pratt, Gerald H. *The Surgical Management of Vascular Diseases. Philadelphia: Lea and Febiger, 1949.*

similar fashion. Stylets are withdrawn. The physician ascertains that the needle is not in the large blood vessels or the dura. After this, 5 cc. of 2% novocaine are introduced at each point. The needles are then withdrawn.

The patient rests on his abdomen, slightly more on the side on which the solution was injected, in order to aid pooling of the solution in that area. A sympathetic effect generally occurs within a few minutes. In some patients, however, it may not be felt for ten or fifteen minutes.

For a thoracic sympathetic block, the technique is much the same. The patient lies on his back, with a pillow under the lower part of the neck. The anterolateral approach is used for the technic of the block; the needle is introduced above the clavicle at a 45° angle with the anteroposterior plane. The needle is introduced carefully until vertebrae are encountered. The needle is then "stepped" forward along the bone. When the injection is successful, a Horner's Syndrome develops. This syndrome consists of (1) a narrowing of the palpebral fissure, (2) a constriction of the pupil on the affected side, (3) a conjunctivitis on that side, and (4) ptosis of the eyelid. Before the injection the patient should receive sodium amytal, grs. 1½, and a hypodermic of atropine. Occasionally, these patients develop a vague reflex with heart block. They should never be left unattended for longer than 20-30 minutes. The equipment necessary for the sympathetic nerve block is essentially the same as that used in routine spinal taps, except that a greater number of needles should be prepared for use.

## *Vascular Soaks And Packs*

ONE of the fundamental measures used in the treatment of cardiovascular diseases is directed toward reducing the vasospasm, preventing infection and stimulating the collateral circulation. Modern concepts of the management of cardiovascular diseases are bringing into sharp focus the importance of the nursing care of the patient with cardiovascular disease. These patients need almost constant attention. Meticulous care should be taken when carrying out the various procedures, particularly is this true when the extremities are involved, where there is ulceration, gangrene, discoloration, pain and severe changes in the temperature of the part. When procedures such as vascular packs and soaks are ordered, they should be applied cautiously. The temperature of the water or pack should be carefully controlled and the patient very closely observed. Because of the impairment of their circulation, these patients are extremely sensitive to temperature alterations. Too much heat may produce serious complications in the involved area, such as burns, congestion, etc. Applications which are too cool may seriously chill the patient. Open lesions, too, require special attention. The proper use of wet soaks and packs cannot be stressed too much. The following procedure for vascular soaks and vascular packs is essentially the same as that used at St. Vincent's Hospital in New York City.

### VASCULAR SOAKS

**PURPOSE:** (1) To increase the local blood supply of the extremity; (2) To cleanse the area and to aid in the healing of vascular diseases.

**EQUIPMENT:** (1) Immersion pail (a new refuse can, mounted on wheels with a simple platform which can be brought to the patient's bedside has served this purpose very well. It is deep, roomy, portable and inexpensive and can be managed easily in the home or hospital). A plastic container may also be used. (2) 2 bath towels; (3) 2 bath blankets; (4) Rubber sheet or newspaper to protect the floor; (5) Bath thermometer; (6) Potassium Permanganate solution 1:15,000 at 92° F. or normal saline solution at 92° F.

**PROCEDURE:** (1) Explain the procedure to the patient; (2) Protect the floor with the rubber sheet or newspaper; (3) Drape the bath blanket around the patient; (4) Help the patient get into sitting position, either on the side of the bed or in the chair; (5) Prepare the solution at a temperature of 92° F., pour into the immersion pail and carry it to the bedside; (6) Immerse the limb in the solution; (7) Drape the second bath blanket across the pail, completely enclosing the limb; (8) If the potassium permanganate solution is used, the treatment is continued for 20 minutes; (9) If normal saline solution is used, the treatment lasts for one hour. The solution is kept at 92° F. by adding warm solution; (10) At the end of the treatment, the foot and leg are dried by patting gently, so as to prevent trauma to the skin; (11) No attempt should be made to dry the ulcerous area.

**AFTER CARE:** (1) Make the patient comfortable; (2) Remove the equipment and scrub the immersion pail with 3⅛% solution of creosol; rinse well and dry.

**CHART:** (1) Record the time of treatment and the solution used; (2) Describe the condition of the patient's limb.

**POINTS TO REMEMBER:** The temperature of the solution should not exceed 92° F., to prevent burning the sensitive skin of an affected extremity (a normal person is able to tolerate temperatures of a much higher degree without burning, but great care must be taken here). To prevent trauma, use gentle movements when drying the skin.

### VASCULAR PACKS

**PURPOSE:** (1) To increase the local blood supply of an extremity with vascular disease; (2) To relax the spasm of blood vessels with heat and increase the circulation of an extremity.

**EQUIPMENT:** A tray containing: (1) A jar of vaseline; (2) 4 tongue blades; (3) A treatment rubber sheet to cover the entire leg and foot; (4) 4 hot water bottles at 92° F; (5) 3 bath towels; (6) Bandage; (7) Bed cradle; (8) 2 bath blankets; (9) Large basin; (10) Emesis basin; (11) Bath thermometer; (12) Tray cover.

**PROCEDURE:** (1) Explain the procedure to the patient; (2) Loosen the bed clothing, place the bath blanket over the patient, and fan fold the bedding to the foot of the bed; (3) Expose the affected leg; (4) Place the bath blanket, folded in half, under the affected leg and cover the leg with the free side of the blanket; (5) Bring the equipment to the bedside; (6) Fill the hot water bottles, being sure the temperature of the water is 92° F.; (7) Fold the towels in half and wring out in water 97° F. (92° F. when applied) and place in a large basin which has been heated by rinsing with hot water; (8) With the tongue blades, gently cover the entire leg and foot with vaseline; (9) Place the rubber under the patient's leg; (10) Cover the leg and foot with the warm, wet towels; (11) Place the hot water bottles over the towels; (12) Wrap the rubber sheet around the patient's leg and foot; (13) Secure the pack with bandage, if necessary; (14) Cover the leg with a bath blanket; (15) Arrange the bed cradle at the foot of the bed and tuck in the bedding; (16) Leave the leg in this fashion for the specified time; (17) Heat is to be maintained for 1½ hours. If the pack is to remain longer, refill the hot water bottles to 92° F. at this time; (18) Keep the foot gatch elevated.

**AFTER CARE:** (1) Make the patient comfortable at the end of treatment; (2) Chart the time of procedure and its duration, and the condition of the patient's extremity.

**POINTS TO REMEMBER:** (1) The temperature of the towels and the hot water bottles must not exceed 92° F; (2) IMPORTANT: A burn occurs easily on the extremity of a patient with a vascular disease. These burns may never heal and may lead to amputation.

## 21 BISHYDROXYCOUMARIN USP. *(Dicumarol)* — ANTICOAGULANT

**DESCRIPTION:** Dicumarol is a synthetic anticoagulantwith an anticoagulant factor which resembles that derived from spoiled sweet clover. It has a faint pleasant odor and bitter taste. It is a slightly buff-colored crystalline powder, practically insoluble in water, alcohol or ether; slightly soluble in benzene and chloroform; and soluble in aqueous alkali.

**PRINCIPAL ACTION:** Dicumarol is a potent, orally effective anticoagulant. Its action is to impair the clotting mechanism to an extent sufficient to prevent pathologic clotting. It prolongs the prothrombin time of the blood. The Dicumarol effect requires about 12-72 hours to develop; and the effect usually continues for 24-96 hours after therapy is discontinued. Dicumarol does not have any effect on thrombi or emboli already present, nor does it increase the blood supply to the affected part. It merely retards further clotting. However, some experimental evidence does show that these agents may bring about partial dissolution of early thrombus material.

**INDICATIONS FOR USE:** Dicumarol may be used alone or as an adjunct to Heparin in the prophylaxis and treatment of a variety of conditions when it becomes necessary to prolong the coagulation time of the blood in intravascular clotting. It may be used in the treatment of post-operative thrombophlebitis, pulmonary embolism, post traumatic and post infectious thrombophlebitis, acute embolic or thrombotic occlusion of the peripheral arteries, recurrent idiopathic thrombophlebitis, and frost bite.

Dicumarol has been used as an adjunct in the treatment of coronary thrombosis, since here the ultimate outcome depends upon the extension of the clot and upon the formation of mural thrombi in the cardiac chambers.

**ADULT DOSE AND ADMINISTRATION:** Dicumarol is administered orally. Dosages are determined by clinical study and are adjusted according to clinical and laboratory findings. The prothrombin time is determined every day during therapy. Usually Dicumarol is given in dosage of 100-300 mg. per day until the clotting time is 30 seconds. If it reaches between 30-35 seconds, the dosage is reduced to 50-100 mg. daily. And if it rises to 35 seconds or more, the drug is withheld and not given again until the prothrombin time returns to 30 seconds or less. Dicumarol is then given cautiously, depending upon the prothrombin level of the blood.

**TOXICITY:** Nausea and vomiting may occur. Excessive doses produce a serious tendency to bleeding. Contraindications include hemorrhagic blood dyscrasias, bleeding ulcers and granulomatous lesions, subacute bacterial endocarditis and impaired renal and liver function, bleeding wound surfaces and after neurosurgery. It should also be used with caution during the last months of pregnancy and in patients with purpura.

**NURSE'S RESPONSIBILITY:** The patient must be closely observed. Special precautions are necessary in treating cachectic or febrile patients and also during menstruation. The effects of Dicumarol are accumulative and overdosage may cause severe bleeding. This drug is not administered unless facilities for accurate daily prothrombin time calculations are available. If prothrombin time falls to a dangerous level and hemorrhagic manifestations occur, the drug should be stopped and preparations made for immediate transfusion of fresh whole blood.

**HOW SUPPLIED:** Tablets, 50 mg., 100 mg. (Ayerst). Capsules, 50 mg., 100 mg. (Lilly—Squibb).

## 22 ETHYL BISCOUMACETATE *(Tromexan Ethyl Acetate)* — ANTICOAGULANT

**DESCRIPTION:** Tromexan is a synthetic derivative of bishydroxycoumarin. It is a white crystalline compound, odorless and bitter. It is soluble in acetone and benzene, slightly soluble in alcohol and ether, and insoluble in water.

**PRINCIPAL ACTION:** Tromexan produces anticoagulant action by reducing the prothrombin concentration of the blood. Since it is a derivative of bishydroxycoumarin, its action is similar to it. Ethyl Biscoumacetate has the advantage of an earlier onset of action. It is effective orally and is given alone, or in combination with Heparin sodium and other anticoagulants.

**INDICATIONS FOR USE:** Tromexan is effective in preventing or inhibiting intravascular clotting. It appears to have the added advantage of being more rapidly absorbed, of having faster action, and of being excreted sooner than other anticoagulants. It is also less toxic and its cumulative effect is reduced. It must be remembered, however, that although its cumulative effect is reduced, it is not entirely free from the dangers of cumulative action and, therefore, must be used with a great deal of caution.

Tromexan is used in postoperative thrombophlebitis and pulmonary embolism, acute embolic and thrombotic occlusion of the peripheral arteries, after vascular operations, and idiopathic thrombophlebitis. It is also being employed in frostbite and impending gangrene.

**ADULT DOSE AND ADMINISTRATION:** Orally, 1.5 gm., in one dose or in divided doses for the initial 24-hour period of treatment. Subsequent doses are 0.6 gm. and 0.9 gm. per day. Action is usually noted in 18 to 24 hours. An even prothrombin level can then be maintained by giving the total daily amount in divided doses.

In patients with kidney and liver damage, the dosage must be carefully determined by clinical study, and regulated accordingly.

Close supervision, with frequent and regular determinations of the prothrombin time, is essential. Daily determinations are usually made during the first several days of treatment, in order to determine the safe and effective treatment. Thereafter, they are done according to the individual requirements.

Prothrombin levels of 30-50% are usually considered satisfactory. Below 10-15% are considered within the danger zone. The prothrombin time of over 35 seconds usually calls for reduced dosage.

**TOXICITY:** In hemorrhage, prompt withdrawal of the drug, intravenous administration of Vitamin K and $K_1$, transfusion of fresh, whole, citrated blood or plasma are indicated. Where there is an elevation of prothrombin time to 75 seconds and no hemorrhage, immediate withdrawal of the drug usually returns the prothrombin time to near normal within 24 hours.

**NURSE'S RESPONSIBILITY:** The nurse has a definite responsibility. Close observation is necessary, for the use of anticoagulants is not completely harmless, and hemorrhages can occur. It is her responsibility to see that all blood work is done and recorded promptly. Laboratory tests may not always be completely dependable. Therefore, the nurse must be alert to discover early signs of hemorrhage. She should watch for hematuria, bleeding of gums, bruising or petechial bleeding and signs of shock, and report immediately to the physician.

**HOW SUPPLIED:** Tablets Tromexan Ethyl Acetate: 0.15 gm. and 0.3 gm. (Geigy Company, Inc.)

**DESCRIPTION:** Digitaline Nativelle is the chief cardiotonic glycoside of digitalis purpurae. It is a colorless crystalline compound, practically insoluble in water, soluble in alcohol. The potency orally is about 1000 times that of U.S.P. digitalis leaf. Digitoxin was first used by Nativelle in 1868.

**PRINCIPAL ACTION:** Digitaline Nativelle is a potent myocardial stimulant. By acting directly on the heart muscle, it increases the efficiency of the heart and tone of the heart muscle. The heart rate is decreased in patients with auricular fibrillation by a combination of direct action on the heart muscle and by indirect vagus action. Although it slows the heart rate, it does not change or remove the irregularity of the heart beat that occurs in auricular fibrillation. Digitaline Nativelle is almost entirely absorbed from the gastrointestinal tract and absorption is rapid and complete. It produces the same therapeutic effect whether it is given orally or intravenously.

**INDICATIONS AND USE:** The drug is used in congestive heart failure, auricular fibrillation and flutter, especially when it is associated with decompensation; paroxysmal tachycardia; to maintain compensation in myocardial fibrosis. It is used sometimes in conditions of shock when the heart shows symptoms of failure. It is used also in infections where great strain is placed upon the heart.

**ADULT DOSE AND ADMINISTRATION:** Digitaline Nativelle is administered by mouth, except in emergencies. It provides uniform dissipation rate with full digitalis effect between doses, and is used for initial digitalization. For full digitalization by the rapid single dose, oral method, 1.2 mg. to 1.5 mg. is usually given at one time, producing full effects in 3-6 hours. Or in divided doses of 0.2 mg., to 0.5 mg. over the 24 to 48 hour period. Digitalization may also be accomplished by giving a daily dose of 0.2 mg. for a period of two to three weeks even when no larger initial dose was administered.

Because of the high order of purity of Digitaline Nativelle, most patients are believed to be adequately maintained on 0.1 mg. daily. The maintenance dose, however, must be adjusted to the individual patient's needs. The drug is administered orally except to comatosed patients or to those who cannot take the drug by mouth for other reasons.

**TOXICITY:** Toxic effects may be produced if the dosage is too great or if the patient has been digitalized previously (within three weeks). Some of these include anorexia, nausea, vomiting, diarrhea, malaise, mental depression, blurred or colored vision, syncope, partial or complete heart block.

**NURSE'S RESPONSIBILITIES:** The nurse must be alert in recognizing and reporting the patient's condition to the physician so that proper steps may be taken in emergencies. Digitoxin is extremely poisonous, and it is important for the nurse to watch for early symptoms of digitalization and overdosage. The symptoms which indicate satisfactory clinical response consist in a slowing of the heart rate to between 60 to 80 per minute, relief of dyspnea, fall in venous pressure, decrease in circulation time, and also diuresis.

**HOW SUPPLIED:** Varich Pharmacol Co., Inc., Solution of Digitaline Nativelle; 0.2 mg., 1 cc ampuls and 0.4 mg., 2 cc ampuls.; Tablets of 0.1 mg. and 0.2 mg.

## VITAMIN $K_1$ *(Mephyton)* — ANTIHEMORRHAGIC VITAMIN 24

**DESCRIPTION:** Mephyton (Vitamin $K_1$) is a sterile antihemorrhagic vitamin. Vitamin $K_1$ is a yellow, sticky and oily liquid; insoluble in water, soluble in alcohol and vegetable oils. An emulsion of Mephyton is homogeneous, and light yellow in color. It is stable in air but decomposes upon exposure to light.

**PRINCIPAL ACTION:** Administered intravenously, Mephyton is a potent agent used to reverse the prothrombin deficiency induced by certain anticoagulants. It increases the formation of prothrombin and reduces the clotting time of the blood. It is found to be of value in controlling hemorrhage induced by bishydroxycoumarin and similar agents.

**INDICATIONS FOR USE:** Mephyton has been found to be effective in reversing the decrease in prothrombin activity that occasionally follows antibiotic therapy. It iseffective in the termination of prothrombin deficiency, as is required when surgical procedure becomes mandatory in the patient receiving anticoagulant therapy. It is also used in clinical Vitamin K deficiency states such as obstructive jaundice, primary hepatic disease, hypoprothrombinemia of the newborn, and in conditions which prevent absorption of the vitamin by the intestinal tract, such as sprue, ulcerative colitis and celiac disease.

**DOSE AND ADMINISTRATION:** For antidotal effect: 50-150 mg. (1-3 cc.) given intravenously at a rate not exceeding 10 mg. of Vitamin $K_1$ per minute. Mephyton may be mixed in a 10 cc. syringe with about 5-7 cc. of a suitable aqueous diluent, such as Water for Injection (U.S.P.), or Sterile Isotonic Sodium Chloride Solution for Parenteral Use (U.S.P.). The emulsion may be added to infusions of dextrose and/or saline. The dosage depends upon the relative severity of the hemorrhagic tendency. In patients who are bleeding from hypoprothrombinemia induced by anticoagulants, a large dose may be ordered. Subsequent doses are determined by the response of the patient as indicated by prothrombin time determinations. In patients in whom prothrombin time determinations are prolonged to a dangerous degree but who are not bleeding, the administration of 50 mg. of Mephyton is adequate in almost every instance to reverse the prothrombin time to or toward normal. A prothrombin time determination should be made about six hours after the injection of vitamin $K_1$ to determine whether or not another dose is necessary. Oral administration is effective but doses of from 200-1,000 mg. may be required and the action may be delayed. For clinical deficiency states, the ordinary dosage is 2-10 mg.

**TOXICITY:** No serious reactions, to our knowledge, have been reported. Following rapid administration, transient reactions may occur. However, they last for only a minute or less and may include sweating, flushing of the face, sense of constriction of the chest, and weakness.

**NURSE'S RESPONSIBILITY:** Mephyton should be protected from light at all times. Appreciable deterioration does not occur during the interval usually required for an intravenous infusion of several hundred cc. However, the mixture must not be left standing for prolonged periods in direct sunlight or in a strong light. Mephyton should be stored in a cool place and protected from freezing. Although there have been no reports of the emulsion separating, in case any oil droplets appear on the surface or adhere to the walls of the ampule, the emulsion should not be used. Any of the contents of an ampule not used immediately after opening should be discarded

**HOW SUPPLIED:** Mephyton — (Merck) 1 cc. ampuls (50 mg. $K_1$ per cc.).

# Valvulotomy:

## A Nursing Care Study

*by* ***Merlyn Owens,*** *Student*
*Yale University School of Nursing, Class of 1954*

The nurse administers ACTH to a patient with rheumatic fever. The Council of Rheumatic Fever of the American Heart Ass'n. is conducting an international study to find the effects of this drug and cortisone on the disease.

**Miss Owens, a student at Yale, relates her experience in nursing a valvulotomy case. Investigation of the patient's social and health background and the surgery involved enabled her to give complete and understanding care, satisfactory both to the patient and herself.—Editor.**

"MRS. H., who has mitral stenosis, is your final assignment for today," the nursing instructor said.

I took up Mrs. H.'s chart to acquaint myself with my new patient. She was described in the medical record by the assistant resident in surgery as a "forty-six-year-old, small, white female, extremely cooperative, though slightly slow in response." She was widowed with three children. Her diagnosis was rheumatic heart disease with recurrent emboli. She had suffered three episodes of sudden paralysis, tingling, and weakness since 1948 and was admitted to the hospital for a complete work-up and evaluation of her condition. She had been diagnosed as having rheumatic heart disease with mitral stenosis and the recommendation was that she have a mitral valvulotomy "to alleviate mild symptoms related to stenosis, and for improvement of blood flow via the left auricle to release pressure in this structure for whatever benficial effect this may have on the tendency to stasis and thrombosis."[1]

I went to Mrs. H.'s room, which she shared with two other patients, and found an attractive, thin, rather shy but friendly woman who was eating breakfast. I introduced myself and began the morning care.

When I checked her pulse, before giving her digitalis, I noticed it was very irregular and varied in the strength of the pulsation. As I assisted her with walking, I noted she was pale and shaky and her right hand was cool to the touch. However, I saw no signs of dyspnea, coughing or cyanosis. We laughed at the spectacle we made walking up and down the corridor, for she was only five feet, two inches tall and I am nearly six feet. She requested to see one of the patients who had been in her room prior to a cholecystectomy. The patient was not feeling very well and Mrs. H. patted her hand sympathetically and reassured her she would be better very soon. Back in the corridor, she remarked about her friend's changed appearance and expressed concern over her condition. I explained that most people experience some discomfort post-operatively because of the anesthesia or the surgery itself, and once we got her friend up walking she would feel much better.

Mrs. H. did not mention her own condition, so I guided the conversation toward it, asking her how she felt about the forthcoming operation and how her children felt about it. She said she was anxious to have it and get it over soon. Her children shared her feelings. I asked if she had any trouble during her pregnancies, and she said none at all. In fact, she had had an easy time. She had never dreamed she had a heart condition. Her husband died when the children were very young and she had worked to raise and support them. Her two oldest children are now married and have families of their own, and she is pleased to be a grandmother. She has been living with her younger daughter and working as a bench operator in a rubber company eight hours daily without excessive fatigue. She had suffered an episode of hemiplegia while at work and since then had remained at home. Six weeks later came her most recent attack. After eating her evening meal, she had an onset of weakness, dizziness, and vomiting. She found it difficult to swallow, and her family rushed her to the emergency room of one of the local hospitals. She was transferred to this

A young patient at Children's Heart Hospital receives a daily check-up on temperature and pulse to prevent recurrence of rheumatic fever.

[1]*Robert Chase, M.D., Case Record, New Haven Hospital.*

hospital after it was determined that she had rheumatic heart diseasee with mitral stenosis.

That evening I went to the library to read about rheumatic heart disease and its complications. It appears that children between the ages of seven and ten who have an infection in the upper respiratory tract, usually streptococcal in nature, are prone to rheumatic fever. It has been determined that two per cent of school children have rheumatic fever. In a study made of one thousand children with rheumatic heart disease, three hundred and forty-four had to limit activities, one hundred and thirty-five were forced to lead sedentary lives and two hundred and nine were restricted from activity in sports.[2]

The results of a Public Health Survey in four towns in Connecticut made in 1948 revealed that rheumatic fever occurred most frqeuently among children who lived in crowded homes, where living conditions were poor. It is felt that an inadequate diet, exposure to cold and dampness, overcrowding in the home, and inadequate sleep and rest all seem to contribute to a child's susceptibility to rheumatic fever.[3]

Here I stopped to wonder about the childhood and homelife of Mrs. H. She can recall her attack of "St. Vitus Dance" (Chorea) which is one of the complications of rheumatic fever. All she remembers being done for her medically was "getting a lot of home remedies and remaining in bed for months." It was interesting to compare that with the present day regime for children with rheumatic fever. Penicillin has played a very dramatic role in the prevention of repeated attacks with the complication of damage to the heart.[4] Interesting too were the suggestions made for a program of rest and activitiy for a child convalescing from rheumatic fever. The child usually is restricted in his activities for five months. This program presents a real challenge to the nurse, who understands the child's need for rest in order to minimize the burden of the heart, but who knows also that a child must do more than just lie in bed all day. Here we see the importance of a pleasant environment, large windows overlooking some outdoor activity, a change of scene by moving the child's bed from one room to another and such activities as painting, clay modeling, puppetry, piano lessons, cooking, etc. All these can be used to entertain the child and yet restrict his activity to some extent.

Returning to Mrs. H., I began to understand why she has mitral stenosis. Due to rheumatic carditis, minute nodules and vegetation develop in a row along the normal lines of closure of the mitral valve between the left atrium and left ventricle. As healing occurs, scar tissue forms, resulting in a thickening and narrowing of the opening. I began to wonder about the emboli and the part they played, but the answer was soon apparent. Because of the narrowed opening, the blood is not received into the left ventricle as rapidly as it should be; consequently, there is pooling and stasis in the left atrium. This condition is conducive to the formation of thrombi. When freed into the circulation, these thrombi become emboli, and if they are carried to the brain they may produce sudden paralysis, tingling or weakness (exactly as she experienced). I think it was then I realized the seriousness of her condition.

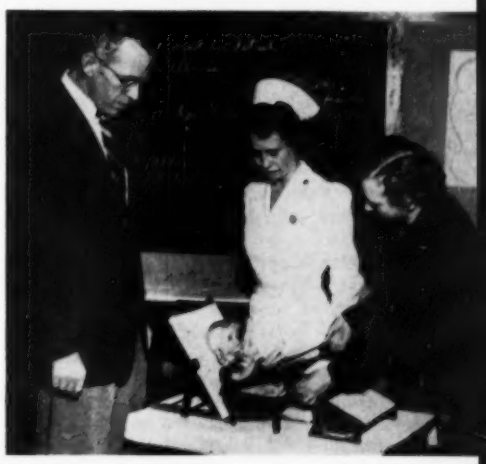
Mrs. H. was to have a mitral valvotomy which, in effect, makes larger the opening between the left atrium and ventricle, and so improves circulation.

The actual technique is "an incision made through the left third interspace. The pericardium is opened, the pericardial sac is sprayed with four per cent procaine and the base of the auricular appendage of the left auricle is injected with procaine solution. A purse-string suture of heavy, braided silk is passed about the appendage, which is then clamped. Most of the appendage is amputated to allow entry into the heart." In Mrs. H.'s case the surgeon, instead of introducing a commissurotomy blade in his glove, employed the fracture method. "The finger is inserted through the opening and into the left auricle as the clamp is released. The pursestring suture is tightened about the appendage while the finger is inside. The stenotic mitral valve is located and explored, then fractured according to the surgeon's judgment. The index finger is withdrawn and the purse string suture is drawn tight, preventing the loss of more than a few c.c.'s of blood. This suture is tied and the cut edge of the appendage is oversewn with fine silk. The pericardium is left partially open and the pleura is drained."[5]

A mitral stenosis operation is performed in Kansas City Gen. Hosp. by Dr. Chas. Bailey, Phila. heart surgeon, before 100 doctors and nurses.

Each morning and afternoon as I walked with Mrs. H., I told her the things she might expect after the operation.

I explained that one of the valves in her heart was very narrow because of the rheumatic fever she had as a child. I told her the doctor was going to make the opening larger in her heart so that the blood could pump more easily and clots would be prevented. When she returned from the operating room she would be turned frequently, about every hour. She would probably be in an oxygen tent, but she should not be frightened by this. It was only to help her breathe more easily. There would be a tube in her chest connected to suction to help get rid of any fluid there and to re-expand her lung. Her blood pressure would be taken very frequently and when we weren't doing that, she would be asked to use the blow bottle. She should cough to get rid of any mucous and we would offer her liquids to



The pediatric clinic at Virginia Medical College uses a miniature home care set to instruct public health nurses with bed-bound patients.

[2] *Alice Morrissey*, Rehabilitation Nursing, *New York: Putnam & Sons, 1951, 35 p.*

[3] *"An Environmental and Sociological Study of Rheumatic Heart Disease," Editorial:* American Journal of Public Health, *October, 1950, vol. 40, pp. 1285-1295.*

[4] *Jean Phimister, "Bed Rest,"* American Journal of Nursing, *July, 1950, Vol. 50, #7, pp. 384-385.*

[5] *Constance Garside Price, "Mitral Stenosis,"* American Journal of Nursing, *February, 1951, pp. 72-74.*

help her kidneys to function well. She was attentive to all I said and had no questions to ask.

As the day for her operation approached there developed moist rales at the base of her left lung which required postponement of the operation for two more days. Mrs. H., though anxious to have the operation, was glad for the two extra days of comfort before undergoing surgery.

Pre-operatively she received digitoxin, penicillin and dicumerol. When she asked why she was getting penicillin, I explained its use to combat infection, and added that by starting it before the operation there would be a reserve built up in her blood.

On the morning of July fifteenth, Mrs. H. was taken to the Operating Room before I reported for duty. During her absence, Mrs. Sweeney, the special duty nurse assigned to Mrs. H., and I prepared her unit in a single room. We ordered the oxygen tent and humidifier, autoclaved the collecting bottle and tubing for chest suction and taped down the stoppers tightly, adjusting the tubes to the proper level in the bottle to insure the necessary pressure for chest suction.

In preparation for the return to the unit we put an infusion pole in the room to hold the transfusion bottle which would probably be running. Also we put a stethoscope, sphygmomanometer and blood pressure sheet in the room for determining and recording pulse, respiration and blood pressure, which would be taken frequently. We ordered a thoracentesis set and tracheotomy set from the surgical supply office and these were put in the room,. The former was to be used in the event that fluid should begin to collect in the thoracic cavity despite chest suction. The latter was to provide an airway in the event Mrs. H. developed respiratory complications. We had an extra set of emergency drugs on hand to be used should any signs of heart failure occur.

Just before noon Mrs. H. returned from the operating room with a transfusion running, and rather timidly I went in to see her. She was just beginning to respond and the first thing I noticed was a marked ptosis of the right lid. Mrs. Sweeney drew me aside and inquired if that condition had been present pre-operatively. I said I had not noticed it before. As I watched Mrs. H. I remembered from my previous reading that the nurse should watch for indications of paralysis which may have resulted from an insufficient blood supply to an area during the operation, or from a thrombus. I felt rather panicky wondering if the drooped lid was the first manifestation of a more serious paralysis. Mrs. Sweeney called her by name and asked her to open both eyes, which she did readily. I smiled to Mrs. Sweeney, as I heaved a sigh of relief.

I helped to turn Mrs. H., remembering always to turn her to her right side to prevent possible herniation of the heart from the pericardial sac. While turning her, I looked for any indications of bleeding on the dressings or on the bedding. When we asked her to cough, I applied pressure with my hand on the area over her incision to minimize the pain. She took fluids almost immediately.

The chest suction required diligence in "milking" the tubing to prevent clots which could clog the tubing and cause an accumulation of the fluid in the thoracic cavity. A clamp was attached to the sheet near the tubing, to be used to interrupt the suction in case of backflow from the collecting bottle.

The transfusion was followed by infusions of glucose and normal saline. She was permitted to have ice chips by mouth and later in the day clear fluids, which she tolerated very well. She was catheterized that night because of retention and again the next morning. Blood pressure, pulse and respiration were taken every fifteen minutes for the first twenty-four hours, and were stable at 90/65 - 76-16 with an apical pulse of 90.

The first post-operative day she was quite lethargic and napped a great deal. She was always pleasant and cooperative. I recalled from my reading that often patients undergo a drastic personality change for the first week post-operatively, becoming ill-humored, nervous and depressed when previously they might have been good-humored and optimistic. I noticed no evidence of any such personality change in Mrs. H.

She progressed very well. The tube was removed from her chest on the fourth post-operative day and on the fifth she was permitted to dangle her legs over the side of the bed. The next day she was permitted up in a chair and was placed on a regular diet, having progressed from a liquid diet to a soft diet previously.

Her stitches were removed and on the eighth post-operative day I had the pleasure of assisting her to walk. We moved her back to a room with three other patients. A few days later Mrs. H. walked unassisted.

Mrs. H.'s tests for cardiac function showed some improvement in her circulation time and venous pressure. She had no signs of cyanosis, dyspnea, faintness or pain. Her pulse was still irregular.

When she was discharged after fourteen days in the hospital, she planned to remain home for several weeks to be sure of getting her strength back and permitting her heart to heal well. Her chart indicated that the Blue Cross was paying half her expenses and she was to pay the other half.

I spoke to Mrs. H. on the phone about two months after her operation. I was pleased that she had remembered me and she was equally as glad that I had called. After chatting a while with her, I asked how she was feeling. She said she had gained fourteen and one-half pounds, had spent the past two months very quietly at home, and had not yet done housework. She was now able to go up and come downstairs, She had no ankle edema, but did have a tingling and numbness on the left side, which responded to heat. She was able to pick things up with her left hand, where formerly she had had little sensation and a poor grasp.

Mrs. H. has returned to the surgical clinic twice and the cardiac clinic three times for re-examination and evaluation, and does not plan to work for a few months. She and her sister are living together and are quite comfortable. She should be able eventually to return to the type of work she was doing before her illness.

As I thought back over these fourteen days I was most grateful for the experience I shared with Mrs. H. Looking in on our newest valvulotomy patient I found that unconsciously I was observing and watching for all the things I had just learned.

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## The Dynamics of Human Relationships

***by Theresa G. Muller, R.N.***
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WHEN we talked about thereotypes, questions were raised with regard to the trouble we tend to get into by stereotyping another person, and the effect on the person who is stereotyped. Persons in positions of authority are likely to find themselves filling a preconceived role. Let us see how a group of graduate nurse students reacted to the story of one such person who tends to be a stereotype in nursing.

Miss Ro looked expectantly at the assembled members of her seminar group and then spoke: "I'd like your reactions on the story of Dessie which is written up in the September, 1950 issue of RN. May I read it to you?" The expressed consent was given, and the following excerpt will give some indication of the nature of the article.

'When I first knew her she was well past 65, but she reported on duty every day just as the other nurses did. . . . Dessie's pet peeve, I think, was the prevalence of cigarette smoking. . . . Dessie could be seen carefully picking up cigarette butts from the sidewalks and lawns and dropping them into a brown paper bag which she held as carefully away from her as if it contained a rattlesnake. From the expression on her face you could tell what she thought about people who desecrated her beloved hospital's grounds. . . .
I haven't seen Dessie now for several years, but I often think of her. She gave her nurses more than she will ever know. I hear she is still at her hospital just as she always was, so I know that all goes well there. I am sure she still runs her fingers under the edge of the furniture to find how well the maids are dusting; I am sure her students wear a minimum of make-up; and I am sure the children in her hospital are getting the best of care. Dessie is seeing to that.'

The following discussion excerpts will give some clue to the individual reaction to the authority problems inherent in the story.

Ga: The writer pays a tribute to Dessie because of the educational experiences she gained from her which became meaningful only with the passing years.
Mu: That's not what she said.
Ga: She said she had not seen Dessie for some years.
Ch: She considered Dessie a remarkable person after she left her.
Ga: Why did she write about her?
Ch: Because she wanted to share her newly achieved insight with someone else.
Ga: Insight wouldn't come to everyone.
He: Look at those who have Dessie's surface. What is inside?
Ga: What do they do to student nurses?
He: Well, Dessie will be there until the bricks cave in. Wonderful, but married to an institution.
Ga: There are differences in being married to an institution. You can love your work and it can be your life, but not to such a selfish extent. It rules out the contributions of others.
He: By pushing, or because they can see she's right and admire her?
Ga: No, (reading) "poor nurses do good nursing in spite of themselves. No one dared fall down on the job while Dessie was there."
Ro: She loved children. That is why she worked to get community support for a children's hospital.
He: If she had that sensitivity to children, she must have had it for her personnel.
Ju: Evidently she didn't, according to the article.
He: I think she did. We seem to be making our own inferences by drawing on past experiences.
Mu: Miss Co?
Co: Not for publication.
Ju: I should think that if you were happy in your work, you would naturally be nice to people. I think Dessie was kind of mean at times.
Ro: How does her zeal in work affect the balanced outlook which is considered the basis for mental health?
Ju: That is not the same for everyone.
He: You mean, personal needs make a difference?
Ro: Yes, your outlook on life makes a difference.
He: (about somebody she knows) Sometimes I want to shake her because of what I think she is missing. Then I reconsider, "Why, you have all you want."
Ga: Miss Ju, do you mean that if you are happy . . .
Ju: If, as a person, you have found work that is satisfying, your needs are satisfied. Then you are likely to be nice to others.
Ga: What about other people's needs?
Ju: I'm saying if you are happy yourself—I don't think Dessie is happy.
He: Most of us are afraid of not doing things right. I have often been scared of not doing things right. Does that make sense?
Ga: Dessie's effect on her students might result in a flatness, a loss of feeling for people.
Mu: None of you seem to be concerned with what I might think.
Ga: Maybe a part of me is like Dessie.
He: You're a motherly type of person and perhaps you don't like to admit it.
Ga: There are different kinds of mothers.
He: You don't want to be the wrong kind of mother.
Mu: Francis Thompson's "Hound of Heaven"[*] indicates the futility of flight from oneself. Flight is compared to physical energy in various forms, now light, now movement, now chemical change. At first it may be unchecked, uncompensated and without sublimation, then directed into one channel or another, and finally the individual triumphs in a religious sublimation.[2] Does Dessie know how she affects people and, therefore, picks up the cigarette butts herself?
Ga: Wasn't it pretty late in the game to get insight like that?
Mu: Francis Thompson indicated that until controls are built up within oneself, controls will need to come from outside.
Ga: Do you think Dessie influences people to use their own controls?
He: I believe in discipline.
Ga: We generally tried to influence nurse cadets through school loyalties and the problems they would have to face. Regulations were set up and were self-imposed, based on such things as health, time limitations, and en-

vironment. Dessie imposed things on people.

Mu: She didn't tell others to pick up butts.

Ga: She wouldn't permit cigarettes until she could no longer withstand them. Nursing schools are becoming more permissive; I don't say they should be free.

Mu: If anyone wishes to smoke, an assertion, "I have a right to smoke," might also consider the rights of those who don't like to have their furniture burned, or smoke blown in their eyes.

Ga: In smoking as in any community living, you should know both sides of the fence. In nursing, students need to be taught the value of self-control and self-direction.

Mu: You teach it, but until such time as they arrive to the place where they can exercise the control, you have to.

Ga: Regulations are set up and self-imposed when they come from themselves. You can expect certain boundaries to be set for adolescents.

Mu: Is there anything wrong (not wrong in a moral sense) for a young person to have regard for the rights of older persons?

Ga: What about the regard of older for the rights of younger?

Mu: We have given that much consideration. Dewey, the exponent of freedom in education, says that it is the duty of the older person to clarify directions so that young persons won't need to flounder unnecessarily.

Ga: Clarify but not impose.

Mu: If necessary, impose. A feebleminded person is not expected to take over the reins.

Ga: I agree that morons can scarcely run a government, even in a democracy.

Mu: Today we need to recognize the unreadiness of a large number of persons who are emotionally immature. Dewey says that ". . . The present affects the future. The persons who should have some idea of the connection between the two are those who have achieved maturity. Accordingly, upon them devolves the responsibility for instituting the conditions for the kind of present experience which has a favorable effect upon the future."[3]

Ch: With regard to the bases for individual freedom you might be interested in Esther Harding's comments.[4] Ability to set limits and to work within them comes from a certain freedom. Civilized man has learned to do things that are expected of him and to modify inrate impulses through self-discipline. However, desire to follow these basic drives is often so strong that ability to act with freedom becomes more or less limited. This is the basis inertia. External direction then becomes necessary to again set the person free. Most persons need some assistance much as Miss Mu mentioned.

Ga: What happens? If you were to forbid smoking in dining rooms and other places, ten minutes or so from meal time is taken elsewhere.

He: There are some good reasons why a nurse shouldn't smoke. Odor on breath, hands, clothes, might prove most unpleasant to some patients.

Ga: Have you ever been on a ward where there's a little room into which everybody crowds?—I've done it and didn't smoke. And yet I am sure I carried away the odor on me.

He: Rules have to be made, just the same.

Ga: You can't expect democratic action where a young person has become accustomed to an autocratic regime.

Mu: Security is experienced by following a pattern not because it is imposed but because no relationship to it has been worked out.

Do: Your mother may have said many things were not right and later you found this to be so.

Ch: And sometimes my mother wouldn't say, but I found out.

Ga: But you found out yourself.

Mu: Moore said pleasure is satisfaction of libido in any of its forms, but contentment which arises from its control, is happiness.[5]

Thus we may note that the discussions were concerned with the stereotype of Dessie's and its influence upon others—patients and hospital personnel; the reasons for Dessie's being as they were; the presence of Dessie's in nursing; the negative and positive influences of Dessie's. It was acknowledged by the seminar members that the story was interpreted and reacted to in the light of the past experiences of each individual.

Therefore, just like anyone else, so may any nurse be likely to color what is seen and heard in accordance with a degree of attainment of emancipation from primitive needs. Inevitable developmental limitations interfere with appropriate ability to understand other persons, and reality is distorted and domination of others is unconsciously perpetuated.

The ability to work with people under organization and authority is a real test of psychological maturity. The existence of authority is one of the social realities with which each human being must contend throughout life and the acceptance of appropriate authority is a sign of personal integrity. It connotes the relative self-esteem of any person which extends to the recognition and spontaneous acceptance of the worth of others. Self-direction is then developed in accordance with the exercise of rational powers modifying irrational impulses and drives.

A nurse tends to bring to her work a distorted concept of authority when early life experiences include undue control by a domineering parent. There is then a tendency for her to be oversubmissive or overdominating. Her influence is likely to be uncertain in her relation to emotionally disturbed persons with similar handicaps and with whom she identifies in blind devotion or repulsion. Proper recognition and acceptance of an external authority, such as a teacher or a religious counselor, may substitute for the loss of a secure relation with a strong person, normally the parent, who exemplifies authority to a child. This is a necessary foundation for inner acceptance of authority as an adult.[6]

There are a number of implications to be explored further for understanding the dynamic bases of discipline, the balance of dependence and independence, and the meaning of integration or wholeness of personality.

"I fled Him, down the nights and down the days;
I fled Him, down the arches of the years;
I fled Him, down the labyrinthine ways
Of my own mind; and in the midst of tears
I hid from Him, and under running laughter.
Up vistaed hopes, I sped;
And shot, precipitated,
Adown Titanic glooms of chasmed fears,
From those strong Feet that followed, followed after.
But with unhurrying chase,
And unperturbed pace,
Deliberate speed, majestic instancy,
They beat—and a Voice beat
More instant than the Feet—
"All things betray thee, who betrayest Me."

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# Commentary

*by Louise Candland, R. N., and Erica J. Koehler, R. N.*

*Industrial Nursing Editors*

THE day is past when medical terminology is understood only by members of the medical and allied professions. The general public today has a still limited but growing knowledge of such matters. There are many forces responsible for this public education. Health associations such as Tuberculosis, Cancer, Social Diseases, Heart, Polio and the like disseminate much information. Life and casualty insurance companies work through the family and industrial population to bring up-to-date health information to the people. Radio, television, magazines, newspapers, and other publications carry reports on medical findings and treatment.

This is all highly desirable. It has promoted a greater awareness of the value of cleanliness, the origin and control of disease, and a demand for good medical care. The increased knowledge of the general public has placed increased responsibilities on all medical people. Patients know when treatments are adequately and skillfully performed. They expect nurses and doctors to wash their hands before treating them and are concerned about the consequences when this is not done. They know that hypodermic needles, eye cups, and instruments must be sterilized between each use to prevent infection and spread of germs.

As student nurses we were constantly reminded of the rigid rules concerning aseptic technique on the wards, and especially in the operating rooms. The rules concerning sterile technique were inflexible and ultimately became habits. Maintaining these habits of rigid cleanliness was made somewhat easier because everyone concerned checked on each other. All of us were frequently reminded of the disastrous results of a break in technique.

As a nurse in industry, this rigid technique might not seem so important. The chances of cross contamination seem more remote. Most workers are in good health and hence have greater resistance to infections. The application of a band-aid to a minor laceration does not present the same hazards as the redressing of a large surgical wound. Consequently, even though a member of the industrial medical department may become lax and take short cuts in technique, there may never be any untoward results. The eye cup which is washed but not boiled, or the fact that a nurse does not wash her hands between patients or permits unauthorized people to help themselves and contaminate sterile supplies, may never cause an infection; but the possibility is always there.

As a rule, the worker is aware of and concerned about these possibilities. Although he may not mention it to the nurse when he observes the wrong technique, he thinks about it and talks it over with his fellow workers, and thereby starts the disintegration of his trust in the ability of the nurse.

In our contacts with both workers and management, we are exposed to both the high praises of the careful and meticulous nurse and the criticism of the careless one. We learn, to our surprise very often, that employees are embarrassingly aware of the unboiled instruments, the unwashed hands and dirty finger nails, poorly kept uniforms, the contamination of dressings and other sterile supplies. The worker who can justifiably criticize the nurse can hardly be expected to report to her for early treatment following injuries and cannot be blamed for taking chances on self-treatment rather than reporting to the first aid department.

On the other hand, we are pleased to learn that the workers are also very impressed with the nurse who takes the time to prepare for a treatment as if she were still in the hospital. He notices that she prepares the area of a wound by proper cleansing, that her equipment is protected, that she is careful not to contaminate anything she uses, and that she disposes of waste material properly. This nurse, whose technique is above reproach, has the respect and trust of all workers. She need have no fear of poor results from her treatment, she has complete response and cooperation from the workers and, above all, her teaching of the necessity of prompt treatment is both meaningful and easier because she, herself, sets the example. She also knows better than to try to fool the workers—they get the credit for knowing the difference between good and bad technique.

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# Benefits Of A Pre-Employment Physical Examination Program

*by Rose P. McKay, R.N.*

IN THE past forty years longevity has increased among industrial wage earners. Influences which contributed to this longer life span are the enactment of workmen compensation laws, the reduction of working hours, the improvement of economic standards and the wider application of industrial medicine.

Accident prevention efforts are no longer limited to "education, engineering, and enforcement"; medical control has been added. Countless lives have been saved by correcting such physical impairments as faulty vision, poor hearing, chronic infections, and the like. Industrial medicine has grown as a special field of medicine because the changing social trend has created a specific demand for it.

Industrial management is aware that to improve the health of a worker benefits the employer as well as the employee. Management is also aware that it is necessary to work closely with the departments of labor and health to promote a sound public health program for adults.

The following four points are the major objectives of an industrial medical service:

(1) to ascertain by examination the physical and mental fitness of an employee for work.
(2) to maintain and improve the health and efficiency of those already employed.
(3) to educate workers in accident prevention and personal hygiene.
(4) to reduce absenteeism caused by illness and injury.

In establishing any medical service, the company must consider the advantages to be derived from it. Some advantages which will be derived from a pre-placement examination as an essential part of the medical service are that a complete physical examination serves as a point of departure into the various channels of a full program. These advantages include:

(1) establishment of a satisfactory relationship between workers and medical departments.
(2) employees with treatable defects are referred to private physicians or proper agencies for supervision of defects.
(3) it is possible to do effective health education work during the examination and interview.
(4) it may delay total disability in the face of chronic, slowly-progressing illness.
(5) the record establishes a base line from which findings at future examinations are measured.
(6) as records accumulate they should be the subject of study and review by the medical staff, to develop a body of practical and essential information concerning the specific plant.

The primary purpose of the pre-placement physical is to determine the worker's fitness for certain types of work. Another important function of this examination is to advise the applicant of his defects and to make suggestions for means of correction.

The physical examination should be comprehensive. It should include tests for vision and hearing, pulse rate, blood pressure, urine examination, chest x-ray and serological test for syphilis. After these preliminary tests are completed, the physician does the actual examination, paying particular attention to the heart, joints, bones, muscular and nervous coordination. He also examines for hernia and other physical and mental disabilities. An interpretation of the examination with recommendations as to the worker's fitness for certain positions is then made by the physician to the person responsible for placing the applicant. It is important for the physician doing the examination to be aware of the physical work requirements of the job for which the worker is being employed. Some findings, such as arthritis, tuberculosis, nervous disorders, and heart conditions limit the type of work an employee can do, and it is important to place a man on a job which he can do efficiently and safely. A carefully-performed physical examination is equally valuable to industry and the applicant.

The applicant receives the following benefits:

1. Accurate information concerning his physical condition.
2. A sense of satisfaction and security if his condition is found t be good.
3. Early discovery of any disease or defect needing correction.
4. Less lost time from illness.
5. Reduction in hospital, doctor, and medicine bills.
6. Better job placement.
7. Assured protection in the event of claims.

The employer benefits by:

1. Reduction of absenteeism from sickness and accidents.
2. Reduction of labor turnover.
3. Less insurance cost from accidents, disabilities, etc.
4. Increased employee efficiency because of better job placement.
5. Decreasing the possibility of overt acts of mentally unbalanced or epileptic individuals.
6. Prevention of the spread of communicable disease.

Pre-employment rejections due to examinations do not usually exceed 6% of the total applicants examined. Experience has shown that the type of physical defects observed as the result of examinations vary in different industries, even though similar in type, because of differences in age groups of employees and also because of different methods of interpreting exactly what constitutes a defect.

The following is a sample of defects which were found in a large industrial medical department.

| | |
|---|---|
| carious teeth | 22.15% |
| defective vision | 16.56 |
| pyorrhea | 11.11 |
| B.P. 150-174 | 10.23 |
| open inguinal rings | 9.65 |
| chronic tonsilitis | 9.38 |
| flat feet | 6.48 |
| valvular heart disease | 5.88 |
| inguinal hernia | 5.08 |
| obesity | 3.43 |
| albuminuria | 3.06 |
| varicocele | 3.06 |
| malnutrition | 2.82 |
| B.P. 170-190 | 2.70 |
| hemorrhoids | 2.20 |
| B.P. under 105 | 1.98 |
| varicose veins | 1.81 |
| inguinal adenitis | 1.70 |
| B.P. over 200 | 1.56 |
| atrophy of testicles | 1.39 |
| chronic urethritis | 1.38 |
| umbilical hernia | 1.33 |
| cardiac hypertrophy | 1.14 |
| bronchitis | 1.08 |
| benign tumor | 1.03 |

An analysis showing the physical work requirements for each job classification is important and should be done jointly by management and the industrial medical department. Such an analysis is most helpful in determining where employees with physical defects can be placed safely and efficiently. It is also important that applicants be classified according to physical findings. Most physicians clas-

sify applicants in four groups—A, B, C, and D.

1. A includes applicants physically fit for any type of work; no defects of any importance found.

2. B indicates limited physical underdevelopment, or slight defect but in all other points fit for work; i.e., decayed teeth, pyorrhea, chronic tonsillitis, moderate under- or overweight, etc.

3. C indicates that defects found involve limited employment or selected classes of work, such as a well-compensated heart lesion, arrested tuberculosis, asthma, blindness or vision of 20/200 or less in one eye, defective hearing, hernia, moderate vascular disease, amputation of one limb, etc.

4. D includes all those applicants unfit for employment due to physical defects or diseases. Vascular heart disease with B.P. over 170, late pregnancy, severe varicose veins, alcoholism, and epilepsy would be some of the conditions considered.

At the time of the pre-employment physical examinations, measures to prevent and control occupational disease hazards should begin. For example, protective measures to prevent occupational dermatosis should include a careful examination of the skin for existing pathological conditions. The United States Public Health Service found that in a period of one year, one per cent of the workers in factories were affected with occupational dermatoses — not including burns, chemical splashes, and pyogenic infections of skin wounds.

Control of tuberculosis in industry relies on the pre-employment physical examination for case finding. In addition to the chest x-ray, the examination should include a careful personal, familial and occupational history. Applicants showing evidence by x-ray should not be employed until a definite diagnosis is carefully determined.

State and local health departments have been given responsibility for community venereal disease control programs. Therefore, these authorities should provide for industry certain fundamental services and facilities already developed as part of the general program, such as free serological exams and the use of laboratory facilities.

The vision program is also very important. It has three essential objectives:

(1) to prevent accidents
(2) to reduce fatigue and eye strain
(3) to provide adequate protection in hazardous circumstances.

More recently, in the pre-employment examination, more attention is being paid to the psychological aspects of the human being. To have a psycho-metric test for each applicant for employment would be an ideal part of the general examination program. The emotional make-up of the individual has much to do with the type of work in which he will be successful.

A program for health maintenance of women employees has as its first point a thorough pre-placement examination and safe placement in cooperation with the industrial toxicologist and hygienist. Other problems of women in industry relating to their physical condition and efficiency regarding dysmenorrhea, menopause and pregnancy will be best handled in terms of the individual situation, the type of industry concerned, and the extent of medical service available to that industry.

Use of the pre-placement examination should be made to help correct the defects that are found. In fact, many authorities believe that the examination is pointless unless an attempt is made to help employees correct their physical defects.

The advantages of a pre-placement physical examination program may be summarized as follows:

(1) A favorable opportunity is presented for health education of workers. This education may be of a general nature as well as stressing the importance of correcting physical defects.
(2) Diseases may be discovered in early stages. This would result in early and more effective treatment.
(3) The worker is more easily placed in jobs in which both he and the employer are mutually benefited.
(4) Absenteeism due to ill health can be better controlled.
(5) Accident-prone persons can be placed more safely. This would result in a better accident-frequency experience for the plant.
(6) There would be a reduction of unjust compensation claims, because a record of old injuries would be made.

A properly administered, carefully planned pre-employment physical examination program will benefit both the employee and the employer and will result in better, more economical industrial production.

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Betty McLeod, plant nurse, shows the personnel manager, Allison D. Allison, the report from an employee's Keystone Vision test.

# Nursing in a Petticoat Plant

*by Cherry Parker, R. N.*

ANY industrial nurse who deals with the "petticoat trade" has been confronted with some of the special problems of working women. Betty Bone McLeod, R.N., who works at UNITED MILLS, Mt. Gilead, North Carolina, is no exception, since most of United's 900-odd employees wear petticoats as well as make them.

Mrs. McLeod, who graduated from Cornell University—New York Hospital School of Nursing in 1943, seems to have the ideal background and personality for dealing with women in industry. After graduation, Mrs. McLeod worked in surgery for one year. She did Army nursing for two years; then obtained her B.S. degree in Public Health at New York University. This course included training in industrial nursing.

Allison D. Allison, Personnel manager for United Mills, says of Mrs. McLeod, "She has an outstanding personality and the ability to deal with all types of people. We look to our nurse to be the 'first line of interference' in our personnel relations."

And Mrs. McLeod is the first line of interference. Her duties are varied and she deals with all sorts of problems.

The women employed at United range in age from eighteen to sixty. The average age is thirty-one, but at this plant the older employee, who is physically able to work and has good eyesight, is considered a good employment risk. This type of woman usually has a family and is stable—not a fly-by-night. In industry, one of the problems which must be considered in the employment of women is the fact that the turnover of women is greater than that of men.

Each new employee at United is given a thorough physical examination by the plant doctor in his office in town. Then she takes a manual dexterity test and a Keystone Vision test at the plant. Since most of the employees do close work sitting at sewing machines, both manual dexterity and good eyesight are of primary importance.

Besides eyestrain, what are some other problems of women in industry?

"Tiredness," says Mrs. McLeod. "Most working women are trying to do two full-time jobs and the strain shows eventually if some adequate plan is not worked out at home for sharing the load. Then, some women are unhappy with their jobs and consequently are more tired. If such an emotional factor is involved, I sometimes talk it over with the forelady and this seems to help." Other causes of tiredness are physical in origin—low hemoglobin or other complaints which can be remedied under the doctor's care.

Posture, too, seems to be more of a problem of women. At United Mills, the chairs are constructed so as to improve posture and give back support. Mrs. McLeod encourages the wearing of comfortable low-heeled shoes and the use of both feet on machine treadles to avoid foot strain. She always stresses the improvement of appearance when she speaks of posture.

Dysmenorrhea is a frequent complaint. A history is taken on chronic complainers and heat and rest are used in addition to medication prescribed by the family doctor of the patient.

In the age group employed at this mill, pregnancy is another factor to be considered. Since none of the work involves heavy lifting and job changes are seldom necessary, the pregnant employee (with her doctor's permission) is allowed to work for six months. She is checked frequently during this period.

Menopausal symptoms are also fairly common among working women. These patients are referred to their family physicians, when necessary, and Mrs. McLeod recommends regular and complete check-ups for this age group.

Personal hygiene and diet are not to be overlooked as important factors in the good health of women, Mrs. McLeod feels. She often gives talks over the plant loudspeaker, stressing proper eating habits, the need for deodorants and personal cleanliness, and keeping the bathrooms clean.

Dispensing machines are conveniently placed in the restrooms and health pamphlets are distributed. A diet chart in the Dispensary is used to teach proper eating habits.

WHAT about accidents among women? This plant has a very excellent accident record—only one lost-time accident in 1951. The chief accidents here seem to be small lacerations from hand tools and needle punctures. Since the local doctors believe that the machine needles used are practically sterile and since all accidents are reported promptly to the dispensary, which is centrally located, infections are negligible.

A cooperative Safety program is "the order of the day" at this plant. Each foreman or forelady is in charge of safety in his own department and constant safety awareness is urged by the use of safety posters and in the plant paper, "Undi-Cover Review." Safety suggestions submitted to the "suggestion box" to encourage thought on safety, receive cash awards.

With all these special problems of women, tiredness, vision, posture, dysmenorrhea, pregnancy, menopause, personal hygiene and diet, plus accidents, absenteeism looms always as a major problem.

Each forelady in the plant turns in a weekly absentee report to the nurse. Mrs. McLeod, in turn, keeps an absentee card on each employee which, at the end of the year, furnishes a very accurate record of absenteeism and its causes.

Helping women employees adjust to their work can be very rewarding to the industrial nurse who uses her knowledge to help them with their special problems. It is rewarding, too, to be part of a team, whether that team is turning out automobile parts in Michigan, match-box covers in New Jersey, or from North Carolina—pretty, lacy garments, packed by the dozen in cherry red boxes.

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*List of suggested pamphlets which can be obtained free or at a minimum cost:*

*Our Daily Food—American Inst. of Baking, 1135 W. Fullerton Ave., Chicago 14, Ill.*

*How to Prevent Diseases of Children—Cutter Laboratories, Berkeley 1, California*

*How Should I tell My Daughter? (On menstruation)—Miss A. Shelby, Ed. Director, Personal Products Corp., Milltown, New Jersey.*

*Cancer, TB, other—Obtain from local Public Health Departments.*

# Industrial Health News

### Ways To Meet Nation's Health Needs Enumerated By President's Commission

The President's Commission on the Health Needs of the Nation has recently published its full report. The main conclusions of the commission are as follows:

(1) Socialized medicine along British lines is not recommended. The private relationship between physician and patient should be continued.

(2) Prepaid health service, privately financed, is the big objective. The Federal Government can encourage this type of service by a system of reinsurance.

(3) A health authority needs to be set up in each state. This authority would plan, and assist in providing, complete health service for all the people.

(4) Group practice by physicians and surgeons should be encouraged.

(5) Federal aid is desirable to help build more hospitals and to help in training health personnel.

(6) A department of Health and Security should be established to handle the Federal Government's part of these programs, along with the program of social security.

### Chemical Damage To The Eyes Reduced With Emergency Treatment

Recommended emergency treatment for chemical burns of the eyes is immediate and thorough irrigation with plain water. Attempting to consult charts for antidotes and neutralizing agents is a waste of time. When medical attention is administered, one must assume that first aid is insufficient. Apply a local anesthetic, if at hand, and then irrigate. The duration of irrigation depends on the nature of the chemical and the duration of the exposure.

### Five Years With Industry Subject Of Psychiatrist's Report

A five-year experience in industrial psychiatry is reported by Gerald Gordon, M.D., psychiatrist, E. I. du Pont de Nemours & Co., Wilmington, Delaware. Dr. Gordon describes some of his findings and states that the real cause of the difficulty in the nervous patient is that he is not being required to behave properly, and probably never was required to do so through childhood and adolescence. Dr. Gordon summarizes the findings of his five years' experience as follows:

(1) A psychiatric problem exists in industry which involves at least a quarter of the working force.

(2) The emotionally sick employee causes an excessive number of injuries, absenteeism, and industrial and personnel relations problems. This performance will usually continue until some action is taken to see that it stops.

(3) The emotionally ill employee superficially does not differ from the average normal employee except in the degree of his individual productivity.

(4) Management and supervision can successfully rehabilitate many emotionally sick employees by requiring normal performance. The sickest individuals seen are those who have had the most done for them.

(5) It is possible early to identify the potential problem employee by properly decentralizing and correlating pertinent data.

(6) In the author's opinion, the psychiatrist's chief function is to make a diagnosis of the emotionally sick employee and give medical support to management for what is, at present, an unpopular course of action.

### Chronic Emotional Problems Province Of Nurse In Industry

True physical causes bring only 47.6% of the cases to the medical department. The rest are due to mental causes; i.e., psychosomatic, feined, environment, escape. To identify a personality problem during preplacement examination, the nurse should look for deviations from the normal, such as whistling through the examination, boasting, talkativeness. Such signs should not disqualify an applicant for work, but they should indicate a more careful personality work-up and follow-up if hired. In addition to the group of chronic producers of human-relations problems, are the normal happy individuals who suddenly experience emotional problems. These people may be permitted to blow off steam to the nurse, who should have sufficient time, privacy, and a good personality to deal with them.

### Industrial Health Plan For Bloomfield, N. J. Announced By Bloomfield Manufacturers Club

The Bloomfield Manufacturers Club has announced an Industrial Health Plan for Bloomfield. Dr. Charles E. Burrows, Bloomfield physician, describes the plan as applicable to small industry. It provides pre-employment physical examinations and periodic health examinations for employees of member plants. It also supplies emergency medical care, laboratory services, x-rays, etc. This service will be available to all employees at any time, at the request of their family physician. The main purpose of the plan is to help the employer keep a check on the health of his employees, himself, and his business associates. The ultimate aim is to cover the entire industrial set-up in Bloomfield with a complete, comprehensive medical program.

### Small Plant First Aid Program Formed By Bureau Of Industrial Hygiene, Detroit

Two nurses working with the Bureau of Industrial Hygiene made 500 visits to plants in the Detroit area to give consulting service to industrial nurses, management, and first-aid workers. The Bureau has developed a three-point first-aid program for the small plant. It recommends that small plants up to 150 employees meet minimum requirements, which include a first-aid kit with recommended content and a posted medical emergency plan; it also required that at least one worker from each shift have first-aid training from an approved source. A part time nurse and a first-aid room, depending on the type of employment, is recommended for plants of 100-500 employees. Full-time registered nurses and part time physicians are recommended for larger plants.

### Announcement

The Section of Occupational Health of Yale University will hold a workshop for industrial nursing consultants at Yale's Department of Public Health, in New Haven, June 15-20, 1953.

The theme of the workshop will be, "The Promotional Responsibilities of the Industrial Nursing Consultant," and will cover the interpretation of occupational health to the medical profession and to industrial and labor representatives; agency policies; the responsibilities of the nurse consultant for the total program; the how, what, when and where of promotion; and the sharing of experiences and techniques. Tuition for the workshop is $25.00. Applicants must be graduate nurses with at least six months' experience as nursing consultants. They may write to Mary Louise Brown, Assistant Professor of Public Health, Section of Occupational Health, 310 Cedar St., New Haven 11, Conn. The group will be limited to twenty nurses and applications will be accepted in the order in which they are received.

# Current Books

## Administration

IT'S YOUR HOSPITAL AND YOUR LIFE.—by Lucy Freeman. Public Affairs Committee, New York, 1952. 32 pages. Price 25 cents.

People who have been looking for a close-up view of hospitals, how they came to be, their current problems and probably future development will find that view in *It's Your Hospital and Your Life*. Written by Lucy Freeman, New York Times reporter specializing in news of welfare, psychiatry and social work, the booklet was prepared to improve public understanding of the nation's hospitals.

One of a series published by The Public Affairs Committee, this booklet may be ordered from the American Hospital Association, 18 East Division St., Chicago 10, Illinois.

## Cardiology

HANDBOOK OF CARDIOLOGY FOR NURSES—by Walter Modell, M.D., Assistant Professor, Cornell University Medical College. Springer Publishing Co., Inc., New York, 1952. 256 pages. Price $3.50.

In caring for a cardiac patient, a nurse has a very special responsibility, as well as opportunity. Much depends upon her knowledge of the disease, her understanding of the patient's problems, and her awareness of all details of any kind of therapy she is expected to carry out. Dr. Modell's book thoroughly reviews all these points; it is the first heart book written specifically for nurses.

*Handbook of Cardiology for Nurses* tells precisely what heart disease is, how its symptoms are produced, and what the course of the disease is. It discusses diagnostic procedures and the nurse's part in carrying them out, and covers modern cardiac therapy, carefully explaining the various methods and aims of treatments so that a nurse can readily follow any therapeutic plan with any doctor and be expert in each case.

This book prepares the nurse for her important duties in cardiac complications and emergencies: when to anticipate the dramatic changes that may abruptly alter the course of the disease; what to look for in the patient; what to do at once; and how to report the important facts meaningfully to the doctor. It leads to a fuller understanding of the cardiac patient as a person, and gives practical measures a nurse can take to assist the patient in adjusting to heart disease.

## Pediatrics

YOUR CHILD CAN BE HAPPY IN BED—by Cornelia Stratton Parker. Thomas Y. Crowell Co., New York, 1952. 266 pages. Price $2.95.

Here is a book which contains over two hundred ways to help a child entertain himself. Chapter headings include: How To Assemble A Bed Box (magic medicine for every child), Paper (dozens of suggestions to keep a child entertained for hours), Reading (getting better acquainted with his world through books), Music (instruments of value to a child; records suitable for various ages), and Games (for one or two to play, ages one to ten).

Throughout the book, Mrs. Parker urges parents to encourage the child in doing things for himself and then discreetly step aside, offering appreciation and cooperation. A child handled this way can return to normal life sturdier emotionally than when taken ill. The author shows not only how to bring skills and confidence to a child through his hands, but how to add to an understanding of his ever-expanding world. There is a chapter on the value to a child of just talking with an understanding adult sitting beside the bed. In addition to the practical instructions, *Your Child Can Be Happy In Bed* contains an appendix for quick reference as to what a child enjoys in bed according to ages; presents to buy, with prices; lists of suitable children's books and magazines; and recipes necessary for the various handicrafts dealt with in the book. These inexpensive, practical suggestions for children and harried adults are useful not only when a child is sick, but also for raising all children happily.

## Professional Nursing

TIRED FEET: The Story of a Registered Nurse—by Kathryn Morgan, R. N. Vantage Press, Inc., New York, 1952. 147 pages. Price $3.00.

*Tired Feet* presents a wonderful collection of incidents from a nurse's career. With understanding and sympathy, the author takes you through a young girl's torments as she faces the State Board Exam, her first surgery case, an exciting romance with one of the most eligible bachelors in Chicago, and many more warm, humorous and dramatic events within the daily routine of a hospital. Here are all the drudgery, romance and soul-filling satisfaction that make up the career of the "woman in white."

Miss Morgan is Clinical Supervisor at the Methodist Hospital in Sioux City, Iowa, and a graduate of St. Joseph Mercy College of Nursing, in Sioux City. *Tired Feet* is her first book.

## Psychiatry

PSCHIATRIC NURSING - - SYLLABUS AND WORKBOOK FOR STUDENT NURSES—by Lenore Kimball, B.S., R.N. C. V. Mosby Co., St. Louis, Mo., 1952. 256 pages. Price $3.75.

This book offers real aid to the student nurse who is beginning the study of psychiatry in theory and practice. It will help her to recognize nursing problems, to evaluate mental and emotional reactions, to organize methods of approach to nursing situations. It will promote an understanding of the different types of personalities and assist the nurse in making accurate observations. It will encourage her to administer expert nursing care. The theme of mental health principles relative to the patient's treatment, his response to nursing care, and his adjustments to the perplexing and changing environment to which he must look for security and satisfaction are an integral part of the studies.

## Surgical Nursing

OPERATING ROOM TECHNIC—St. Mary's Hospital, Rochester, Minnesota, Fourth Edition. W. B. Saunders Co., Philadelphia, 1952. 327 pages. Price $6.50.

Because of the recent advances in operative surgery, the present volume on The Operating Room—Instructions for Nurses and Assistants, has been completely rewritten. Sections on urology and peroral endoscopy are included, and developments in the basic and advanced educational programs for nurses in the operating room are described. Diagrams of the position of the surgical team during various operations, illustrations of the patients in position for surgery, photographs of instrument arrangements, and illustrations and measurements of surgical linens have been included to meet the needs of those concerned with these aspects of operative technic.

## PLEASE NOTE

*The list presented here is compiled from all available sources in an effort to develop a complete listing of new books and pamphlets.*

*The descriptive statement has been submitted by the publisher. Books will be obtained for our readers. Your order must be accompanied by check or money order for the published price of the book, and addressed to Book Department,* NURSING WORLD, *67 West 44th Street, New York 36, N. Y.*

# Report On Improving State Hospitals

**by *Thelma Briggs and Clara Denney,***
*Practical nurse clinical instructors,*
*Wichita Falls State Hospital, Wichita Falls, Texas*

ONE of the main problems confronting mental hospitals, particularly state institutions where salaries are low, is that of maintaining an adequate staff, particularly in the nursing area. The nursing profession has not grown fast enough to meet the demands of all sick people, and more particularly the mentally ill. State hospitals are overflowing with patients who, with proper treatment, might return to society as productive citizens. In the Wichita Falls State Hospital, Wichita Falls, Texas, which has a rated capacity of 1,215 beds, there are 2,713 patients, of which 185 are bed patients requiring constant attention.

Only 300 attendants and nurses care for these patients. It was apparent to authorities in Texas that action had to be taken to care for the ever-increasing population in the state institutions.

The most obvious solution seemed to be to construct more buildings to meet the needs of the patients, but after due consideration it was felt that it would cost the public less if the number of patients needing prolonged hospitalization could be reduced. This required a stepped-up treatment program that would provide more than just custodial care. The chief problem arising from this solution was in obtaining properly trained personnel to promote such a program successfully. The Medical Director for the Board for Texas State Hospitals and Special Schools, Austin, enacted a program that attempts to train the personel now employed to meet the growing need for psychiatric treatment and care. The program was deemed initially expensive but the returns would more than compensate for the cost and it still would not surpass the cost of an extensive building program.

The initial training program requires a basic training period of approximately three months duration. This is supplemented with a two-year psychiatric training program conducted under the guidance of the junior colleges in or near the vicinity of the various state hospitals.[1] The State provides more than two-thirds of the cost of this program. The students assume the remainder of the cost. The Wichita Falls State Hospital has introduced this training program into its system and now has 20 students who have completed the first year of training. This program requires the attendant-students to give part of their free time to college attendance as well as to their studies. There are seven other states that have similar training programs in an effort to meet the demands of the mentally ill. It is not known whether these other states have affiliated their programs with the approved state educational institutions.[2]

With the authorities and public supporting a program of education and training for hospital personnel, it became necessary to determine the effects of such a program on the employees, as well as on the patients who had become accustomed to little or no attention and were permitted to deteriorate in their worlds of fantasy and unreality. To those attendants participating in the college program it was obvious that further training was an important factor, but it does not indicate the attitudes of the remaining attendants who have not volunteered for such training. Until four years ago, little friendliness penetrated the walls of certain back wards housing the more deteriorated patients in the Wichita Falls State Hospital. Many of the patients were nude, untidy, aggressive and destructive, often flaring into violent assault on other patients and on attendants. No treatment of these disturbed patients was attempted; custodial care was considered adequate, with security the prime concern. It was about this time that the new program was introduced to this hospital.

*This paper was prepared under the supervision and direction of Louis C. Weber, Chief, Psychological Services, Wichita Falls State Hospital, Wichita Falls, Texas.*

[1] *"Texas Hospital Board Establishes 14-Point Improvement Program," Mental Hospitals, Vol. 3, March, 1952.*

[2] *"What State Governors Think About Mental Care," Hospital Management, Vol. 73, January, 1952.*

Practical Nursing

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At first, both patients and attendants resisted the changes. The attendants claimed that leniency would surely lead to trouble and could provoke serious frictions. They insisted that the patients could not be controlled properly, that innumerable injuries would occur to patients and employees alike if certain disturbed patients were permitted out of restraint, and that patients were not capable of understanding what was told to them and could not be reasoned with while in the hospital. Some attendants chose to resign their positions rather than place themselves in jeopardy with disturbed patients.

Routine had long been customary with the patients, and they became resistive and aggressive at the first changes. It had been customary for patients to bathe together in the same tub, and often use the same water that had been used by several patients previously. When this was changed so that each patient had clean water and took individual baths, patients often had to be restrained from getting into the tubs while other patients were bathing.

It had been the custom to serve patients' meals on trays, set them on the tables and then permit the patients to enter the dining hall often faced with cold meals. This procedure was changed to a cafeteria style which permitted physically able patients to carry their own trays and be assured of a warm and adequate meal. The attendants felt that such action would create greater problems in the dining halls, and patients argued that they were being made into servants by the new system. Today the patients are more appreciative of receiving warm food and being given the opportunity to ask for an extra serving or lesser amount of food, depending upon their appetites.

Many patients resented dressing and would often lie on the floors in torn clothing or nude. When the occupational and recreational therapy programs were expanded, patients at first resisted the intrusions into their private worlds and made it difficult to keep adequate clothing on them. But as the patients became more and more accustomed to activity, they began to look forward to these daily programs which now accommodate almost 800 patients daily. Not only do the patients wear their best clothing when it comes time for their walks, picture shows, the dances and parties, but they can also be observed fixing their hair and generally improving their personal appearances. They no longer withdraw from activities but, instead, seek them out.

Many attendants who exhibited the "you gotta show me" attitude and always expressed skepticism about new methods are now not only willing to try what seem like extreme suggestions, but will often make their own suggestion or ask if there isn't something new they could try to encourage rehabilitation.

There are on record cases that have shown improvement, although no apparent treatment was instituted in the cases. Patients who were hospitalized for years and had been considered in the incurable classification suddenly, and without known reason, returned to reality and showed marked improvement in their conditions. These patients were granted leave from the hospital and in some instances received final discharges. It may be hypothesized that such results stem from responses to friendlier atmospheres and sympathetic understanding on the part of the attendants. It may be regarded as a superficial psychotherapy that has sufficient force to encourage the individual patient to overcome his regression and/or escapes from reality. Such nurse and attendant-patient relationships make worthy contribution toward overcoming the barriers of suspicion, hostility and indifference behind which some patients hide.

In conclusion, it may be said that the changes being effected in the Wichita Falls State Hospital are a product of better trained personnel, greater understanding between employee and patient, and all out efforts to encourage the patient to assume his responsibility in life and accept reality. Further study of the effects of such a program may reveal techniques that can be applied early in treatment and thus eliminate long hospitalization, or eliminate hospitalization completely if such methods can be used in mental health clinics. Sufficient time has not elapsed to evaluate the effects of the program in relation to the decrease of patient population in state hospitals.

# Publicity for Practical Nurse Training

***by Howard L. Johnson,***
*Principal, The Emily Griffith Opportunity School, Denver, Colorado*

Of the hundreds of different subjects taught free to Denver residents by the Emily Griffith Opportunity School, that of Practical Nursing sponsored throughout the year in conjunction with local hospital authorities deserves outstanding mention and promotion. To gain all due recognition, countless hours of tireless effort are devoted to properly and effectively publicizing the merits of the training to equip capable women for a lifelong career of gratifying service.

Registered nurses and other professional hospital personnel join with able lay members of an advisory committee to plan and recruit for new classes. In addition to speaking before various groups, they offer much by way of incentive and practical ideas to school personnel to inspire their efforts to reach the largest number of people with factual information about community benefits and individual gains provided through training qualified women as practical nurses. The Trades and Industry Department, responsible for the overall program, and the office of publicity and public relations which strives to promote the aims of the program, team with the art and duplicating staff in lending a variety of talents and skills to formulating words and pictures designed to draw understanding, support and response.

This unity of enterprise promulgates the intelligent use of advertising media. Direct mailings, in the form of letters and leaflets are prepared to present the values of the course in a comprehensive manner and to convince recipients of the personal opportunities attached to a highly respected field of employment. Other informational flyers and bulletins are composed for distribution at approved public gatherings, and posters and artistic displays varying in size from 4 by 5 inches up to 12 by 20 feet are made up for placement at dignified rallies and public and private exhibitions and expositions held throughout the city.

Visual aids in the form of charts and films are shown to selected groups, and local radio stations cooperate in airing station breaks in the public interest as well as producing interview, panel discussion and other special programs. Straight announcements are used by newscasters and feature broadcasters.

Paid classified advertisements, often with coupon clip-out application blanks, are inserted into newspaper and other publication space. These paid advertisements are financed by the cooperating agencies and hospitals. Feature articles, with or without 8 x 10 glossy photographic prints, are also submitted to Denver's daily, weekly and monthly newspapers and enlarged or digested for journals and other local publications according to their standard format.

A recent hospital survey of student

An informal action photo is suggested for publicizing school activities. Mr. Howard L. Johnson, principal of the Emily Griffith Opportunity School, and Mrs. Lillian McAfee, R.N., director of Denver Gen. Hosp. School of Practical Nursing, congratulates new graduates.

applicants revealed that pictorial news items influenced 15 out of the total 20 accepted for the year-long daytime training offered. Among the releases were those which carried such headings as, "Opportunity School Sets Practical Nurse Course," "Nurses Earn Caps," Nine Get Diplomas as Practical Nurses," and "Gets Nursing Insignia." The drawing power of this printed material goes far to prove the old adage that "One picture is worth a thousand words."

An effective classified newspaper advertisement, paid by the hospital conducting the course, read "Be a Practical Nurse," and the surrounding copy stressed the dignity of a service career and bannered the patriotic theme, "Relieve nationwide nursing shortage."

A colorful and artistic poster displayed at the hospitals currently conducting schools of practical nursing, and before parent-teacher association meetings, is topped by the words "Caps and Colors," with three diagonally placed white nurse caps against grey, rose and blue backgrounds to illustrate the color band on the caps used by the three hospitals concerned. This lends distinctive identity to each as it directs the eye toward the message in an impressive manner.

Attractively printed booklets, brochures and folders detailing the subjects taught during the year of training, the experience offered and future employment advantages, may be prepared commerically, in the print shop of the Denver Public Schools, or by the art and duplicating staff of the Emily Griffith Opportunity School for direct or supplementary action.

Every facility is placed at their disposal for the purpose, including that of the artist and duplicators who can create and produce almost any number of booklets, leaflets, folders and flyers, as well as posters, program sheets and announcesizes and colors to gain eye appeal and readership to meet publicity needs.

A pictorially illustrated five-fold strong black and white brochure, 4 x 9 inches overall size, includes a blank applicatioin form which can be completed by interested persons, easily detached and mailed to the registration office. The professional wording is simple and direct and includes all the fundamentals of the subjects to be learned. It is easily read because the copy is interspersed with photographic illustrations and each is bordered or separated by large areas of plain space, with variety given in size and style of type as well as in color intensity.

Economy investments by the school to meet extensive reproduction demands, include hand and electrically operated duplicator machines, on which are used carbons available in any number of colors suitable for publicity material, and an electric multilith machine that will produce almost commercial-like work.

The multilithing process is a versatile one, in that drawings and typed copy can be placed on paper mats having sealed surfaces which can be used over and over again to run off great quantities of material in such standard colors as yellow, red, blue, maroon, green, blue, brown and black or in unique highly expressive purpose colors gained by mixing the different inks. Standard typewriters offer a choice of the small Gothic, elite or large pica print-like styles, and an electric varityper is available to provide different sizes and styles of easily-changed type. Copy and drawings may be transferred from short, medium and long-run paper mats capable of reproducing from three to ten thousand copies.

In addition, firm metal and lighter weight pliable aluminum mats may be used to reproduce ten to one hundred thousand copies of needed material. Although the metal mats are at present commercially printed, the school staff saves expense by preparing the aluminum mats. A portograph machine is used to transfer any previously printed matter onto negative sheets, which takes about 40 seconds, and only 21 minutes are required to transfer the matter onto an aluminum multilith plate, saving commercial typesetting and other costs.

Every effort is consistently made to produce more attractive promotional literature, complete with photographs or drawings, to project the idea of practical nurse training in a manner which will influence the greatest number of people who are qualified to meet the requirements of the course. To do this, the standard set by national advertisers must be met and the newswriting ethics applied. Not only is the "who, what, when, why and where" method of news-story telling followed, but in planning the all-important layout for posters, displays, booklets, leaflets, etc., the size, amount of copy and color best suited to the purpose are primary considerations.

All the eye-catching devices known to artists must be used in making up material intended to draw attention and the essential heading, often termed the "punch" or "plug-line," should be written by those skilled in the advertising arts. The text needs to be correctly and carefully composed to explain the course and its advantages; the hospital and sponsor of the training need to be highlighted, and the registration or application location clearly shown. Where drawings are used, the artist should attempt to establish a directional flow which will lead the reader from one important element to another in the copy so that the full text will be read. The essential elements of unity, clarity and simplicity can be exploited.

A common fault among nonprofessional promoters of a product or service is to repeatedly use material which once had value. Such material grows stale and should be replaced as frequently as possible by new illustrations and reworded copy so that the text will be compatible with current advertising and publicity trends when it reaches the eyes of the public. This is often a paramount problem with schools of practical nursing as well as with sponsoring institutions having a limited staff and rigid budgets. It can be met and largely overcome only by the cooperative efforts of all concerned and by making the best use of all available skills and facilities.

To provide adequate nursing care for all who are in need of it, more and more emphatic appeals must be made for skilled service personnel in the field of nursing. Educators sponsoring such training programs, as well as program and student directors, are realizing that the utilization of standard advertising methods is necessary to gain a maximum of public response. Widening promotional avenues will open the way to attracting high calibre women to receive this splendid training.

# Practical Maternity Nurses in Norway

*by Anne Falkenstein Jordheim, R. N.*

JUST a few hours before my first baby was born I met a very nice young girl who was studying to be a practical maternity nurse. She went through the usual admission routine, and I could not find any fault in her technique, although I followed her work with great interest. I do not know how much of the psychology of women in labor she had learned, but she certainly made me feel very welcome, and no chore was too much for her. Throughout labor she was always ready to help me whenever I needed her. At all times she was under the constant supervision of a licensed nurse-midwife.

During my post-partum period, she and other practical maternity nurse students gave me my complete care. Of course, if there were anything out of the ordinary, the nurse-midwife was called. The practical maternity nurses were allowed to give me routine medications, such as cathartics or vitamins, but no sedations or injections.

Having worked in many busy maternity hospitals in the U.S.A. myself, I was astonished at the personalized care which I received. There was always time for that extra cup of coffee which I liked so much; my flowers got fresh water and were prettily arranged every day; and most important of all—I always received the help I needed in the care of my baby daughter. (It was a modified rooming-in unit.)

Every morning the nurses appeared in clean, white, starched aprons over their blue-checked uniforms. They were not allowed to wear any make-up, which in this healthful climate is no drawback, because the Norwegian Mother Nature provides for red cheeks and lips. After having given us our morning care—and this happened every day of the week—they took out our babies, returned with a steaming hot pail of soapy water and gave our room a good cleaning. When I asked one of the nurses whether she minded doing the cleaning, she smiled and answered, "Why, of course not. In order to prevent infections here, someone has to do it who knows how!"

However, the present trend is that more qualified maids and aides should be employed to do the cleaning, so that nurses can give full-time to patient-care.

## Qualifications of a practical maternity nurse

It is rather popular in Norway to become a practical maternity nurse. Especially young girls, who live in the country and did not have a chance to get the necessary preparation to become registered nurses, go into practical nurse training, although a great number use it as a springboard for nurse's training later on. It is, however, not counted toward nurse's training. Most of these young women are carefully selected. As a rule they are very young. In one school I was informed that the oldest student they ever had was 28 years old.

Actually their name is not practical maternity nurse, but **'barselpleierker,"** which means "childbednurses," thus indicating their function of caring for the mothers and babies in childbed.

## Program of study

The study of practical maternity nursing lasts either six months or one year, depending upon the schools. Several excellent large hospitals in Oslo offer a one-year course. The girls receive free room and board, but must pay for their own books, uniforms, and hospitalization. At Rikshospitalet in Oslo (the University Medical School) their educational program is as follows:

A. PRACTICAL TRAINING:
   - 8½ months experience in the maternity wards (mothers and babies).
   - 2 weeks experience on the prenatal floor (Special emphasis is put on the care of pregnant women with bleeding and the various types of toxemias. They also learn to listen to the fetal heart and to catheterize a pregnant patient.)
   - 6 weeks experience on the isolation ward.
   - 6 weeks experience in the labor and delivery rooms.
   - During these 12 months they serve one month on night duty.

B. THEORETICAL TRAINING:
   - Anatomy ..... 20 hours, taught by a resident physician
   - Hygiene ..... 5 hours, taught by a midwife
   - Emergency deliveries .. 5 hours, taught by a midwife
   - Care of mothers ..... 10 hours, taught by a midwife

C. CLINICAL SUPERVISION:
   - Ward teaching of complications during the pre-, inter-, and post-natal periods as opportunity arises, taught by nurse-midwife in charge of clinical instruction.
   - Care of premature babies.
   - Care of complications of the newborn, (with special emphasis on emergency work and the care in a home).

The student nurses have an 8 hour day, and a 48 hour week. They often work split hours. They usually begin at 7 A. M., have a chance to drink a cup of coffee during the mid-morning on the floors, then have one-half hour for lunch, one-half hour for supper. The hot meals are often served during the noon hours in Norwegian hospitals.

## Opportunities for service

I have often heard that there is no future in practical maternity nursing. It is true that there are no ways of advancing in this profession, yet for many women, who are fond of mothers and newborn babies, this can be rich and rewarding work for a lifetime. Some girls, and rightly so, become practical maternity nurses not only because they want to make a living, but because they consider it a better preparation for marriage and family living than many other professions, which might even be better paid.

After graduation, the practical maternity nurses nave several possibilities. Of course they can work in maternity units of hospitals. There they receive an adequate salary and room and board, which is very attractive to many, especially since almost no living quarters are to be had by single persons in the larger cities. Many local communities, chiefly in the mountains and in North Norway, employ, in addition to a midwife, a practical maternity nurse who has to assist the midwife with the delivery of the babies, and who takes over the complete aftercare of mother and baby.

Due to the tremendous distances and the difficult means of transportation, these nurses are often forced to take over greater responsibilities. Therefore they are taught what to do in an emergency; even how to take out perineal sutures, and above all, how to recognize danger symptoms and to report them at once. They know how to improvise in rather primitive home situations. The next doctor or public health nurse might be many, many miles away and might

(*Continued on page* 37)

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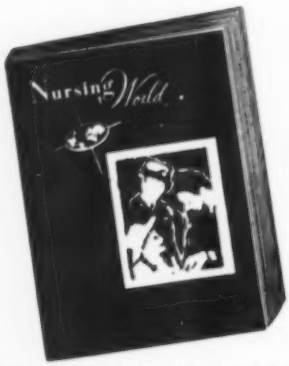


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## Myocardial Infarction

(*Continued from page* 11)

160. Here the use of quinidine is indicated. One of the most common complications is rupture of the ventricle, with sudden death.

After the acute stage has passed, the patient is allowed mild activity. The importance of rest is emphasized and expanded by the nurse during his convalescence. The patient must understand the importance of gradual activity, and because it may prove irksome for him to remain in bed four to six weeks, the nurse must introduce some diversion which is interesting, but not too stimulating.

Cardiac patients provide many instances wherein understanding and thoughtful care can accelerate recovery. They are concerned about the expense of the hospital stay and the threat of lessened earning power when they return home. Many patients do not rest at "bed rest" but become tense, and demand more work from the heart. They would be more at rest if permitted to do some things which seem unnecessary to us but act as a release to them.

During the period of convalescence a plan should be formulated for care and activity of the patient upon discharge from the hospital. The patient is advised regarding plans for increasing activity and providing adequate rest. He should know the signs of over-exertion and understand the importance of avoiding activity which causes shortness of breath or feeling of heaviness in the chest. In regard to diet, gain in weight is discouraged and frequent small amounts of nourishments, rather than large meals, encouraged. If the patient is to be digitalized before discharge, he should be familiar with the importance of regularity in administration and with toxic effects of the drug. Sedatives may be indicated for sleep as necessary. Emphasis should be placed on the avoidance of infection to prevent further work load on the heart; and of the importance of regular elimination. The nurse endeavors to help the patient maintain an optimistic attitude by stressing his opportunities rather than limitations. It must be remembered that reassurance should be given only as long as it can be honestly given and that constructive suggestions should be within the hopes of the patient and the limits of truth. In general, the decision on the type of life to be adopted by the patient should not, except in extreme cases, depend on the physical condition alone, but should be adjusted to life circumstances and personality needs of the patient. One must recognize the patient's needs for independence in planning for work, rest, recreation and medical follow-up. To give the patient an understanding of his illness without fear, requires both tact and discretion. Every effort must be made in teaching and planning to prevent the patient from becoming a cardiac invalid.

Although the occurrence of a myocardial infarction always carries with it serious prognostic import, it is well to remember that an increasing number of patients have survived such an illness for periods of many years. A healthy psychic viewpoint will extend the lifespan of many patients and enable them to lead more independent and productive lives.

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## Aortic Graft

(*Continued from page 13*)

ribs and provides an analgesia of the chest wall which lasts for about one week. This measure will relieve the pain to a considerable extent, but it remains great throughout the immediate postoperative period.

The patient may lie in any position which is comfortable to him and may be supported by soft pillows. At first it seems most desirable to have him lie flat in bed but usually by the next morning he prefers to have his head elevated. Frequent turning is important and he should be encouraged to move and to help turn himself. Extreme apprehension about his own condition sometimes retards his activity; the nurse can do much to help him realize that he cannot harm himself and that some moving about is desirable. Usually he will avoid lying on the operative side; the back and right side are alternated.

By mouth, fluids are started when the patient is no longer nauseated and most patients are ready for a soft diet by the morning of the second day.

Occasionally the chest suction catheter will require irrigating. The nurse then prepares a tray with a large sterile syringe and 100 cc of sterile saline, containing 100,000 U of penicillin, for the doctor's use. By the fourth day there is no longer any drainage from the chest catheter and the tube is removed by the surgeon. If there is further collection of fluid in the chest a thoracentesis may be necessary. Stitches are removed from the chest wound and the ankle on the sixth postoperative day. Dry sterile dressings are continued for a few days longer.

A patient who has not had a graft can start gradual ambulation as soon as the chest and urinary catheters are removed, but bed rest is maintained for a full week when a graft has been used. Patients may be discharged whenever their condition warrants it. Most patients go in about two weeks following operation; a few remain in the hospital much longer. Patients who live at considerable distances are asked to remain in the city for a few days or a week and are checked at intervals. Flying is not contraindicated and is preferred to a long tiring trip on train or bus.

The discharge instructions are given both by the nurse and the doctor. The doctor will give the patient an order for codeine since the chest pain will remain somewhat troublesome for at least a month following discharge. Because of this pain the patient's posture is rather poor at the beginning of ambulation with the right shoulder carried high in an effort to splint the left side of the chest. This posture corrects itself as soon as the chest pain is gone, about six weeks postoperatively. The nurse should encourage the patient to hold himself straighter and upon discharge it should be explained to him that this condition will correct itself, since there has been no case where it has continued to be a problem past the duration of the pain.

Because of the seriousness of the operation, patients, particularly the older ones, tend to be overcautious and protective of themselves. It is important to help them realize they will do no harm to the graft with the gradual resumption of normal activity; most patients will be able to assume a normal mode of life in about six weeks after discharge.

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## Practical Maternity Nurses

(*Continued from page 32*)

have to travel for days by boat, sledge, or skis on the cold, dark winter days in order to get to a patient.

Practical maternity nurses can also be employed in children's homes, orphanages, or in homes where a new baby has just arrived. She will mainly take care of the baby's needs and help the mother, according to previous arrangement. She will not take any job unless she is sure about her salary, her time off, and her responsibilities. Often she helps with the housework, but does not do the heavy cleaning or big wash. Often she is the only teacher of the parents, especially if it is their first baby. At all times she wears her uniform and her cap and pin.

### Guidance and supervision

Practical maternity nurses are neither licensed nor registered. They do not have their own organization, but their education is supervised and guided by a Norwegian Woman's National Advisory Committee, consisting of prominent women from the various women's organizations, as, for example, doctors, nurses, housewives, professional women and others. This means, therefore, that no one can merely put on a white uniform and say that she is a practical nurse.

The hospital uniform and pin are both insurance and assurance. It is taken for granted that the practical maternity nurses must live up to the standards of their respective hospitals. And they can ask for personnel policies which correspond to their education. This two-way protection adds much toward cooperation between the nurses and the public. Norwegian parents do not have to worry about getting an unqualified person to care for their babies. Although the practical maternity nurse can be employed through a nurses' agency, it is considered perfectly professional if she puts an advertisement into the local papers as such: "Practical maternity nurse available as of January 1st. Please telephone 15-18-98." If she is then to be employed by a Norwegian family, all they do is call up her training school to find out whether this nurse will be recommended by them.

In America we have asked the following question many times and discussed it back and forth: "Can we educate practical nurses and student nurses side by side?" Here in Norway it seems to work out very satisfactorily, which, I am told, is due mainly to the attitude of the different groups. At Rikshospitalet, for example, student nurses, student midwives, and practical maternity nurses are educated together.

Naturally their functions overlap considerably. Take, for instance, the feeding, bathing, and observation of the newborn—all three groups must get experience in this area. I have seen them work together very peacefully in the nursery, and I had no idea who was who, because they were doing exactly the same thing, regardless of their previous preparation. On occasions, they even have to relieve each other. That does not mean, of course, that the practical nurse delivers the midwife student's patient, but she might perhaps finish giving a perineal care or attend to a premature baby's tube feedings.

All three groups realize that in order to give their patients effective nursing care, they need each other; more so in the community than in the hospitals. The practical maternity nurses are not resented by their coworkers. They need not struggle for recognition by the public or by the medical world, because their hospital school is their recommendation. A good hospital would not graduate an inadequate practical nurse.

So the Norwegian "barselpleiersker" in their own modest way, virtually unknown by the rest of the world, have done and shall continue to do their share in keeping the maternal and infant mortality rate in Norway at a low level matched by few other countries.


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# Practical Nursing News

### Country Needs 100 New Schools of Practical Nursing

An increase of at least 50 per cent in the number of officially approved schools of practical nursing in the United States is recommended by the National Association for Practical Nurse Education. Greatly expanded staffs and facilities are needed in existing schools to relieve the nation's serious nursing shortage.

Including the 21 schools which have been added during the past year, there are now 190 institutions approved by the Association and by State licensing agencies. These schools graduate 9,000 students each year, but 60,000 practical nurse graduates are needed annually. To do this, the United States should have 300 schools each graduating 200 students a year.

### Appointment to Virginia State Board

Mrs. Alice S. Nelson, your associate editor, has been reappointed as a member of the State Board of Examiners of Nurses in Virginia, representing the practical nurses, for a term of five years.

### Oklahoma Association Reports

The Licensed Practical Nurses Association of Oklahoma passed an important milestone recently when nearly 100 of its members received official caps and pins.

The official LPN cap is white with a narrow green stripe. The small square pin was designed by James Neil Northe, an LPN member.

A license depends on (1) three years' experience, (2) a 64-hour refresher course and (3) successfully passing a state board examination. Of the 349 already licensed practical nurses in Oklahoma, 180 belong to the LPN association.

Mrs. Ann Tuel, Oklahoma City, was elected state president. Mrs. Roxie Woods, Tulsa; Mrs. Dora Richmond and Mrs. Floy Brown, both of Oklahoma City, are vice presidents; Mrs. Ruth Maddox, Oklahoma City, is secretary-treasurer, and Mrs. Edna Marie Dennison, Oklahoma City, corresponding secretary.

Four registered nurses took part in the cap and pin presentation. Mrs. Nan Green, executive secretary of the State Nurses Association, was a banquet guest. Mrs. Lucille Terrill, president of the State Nurses Association, spoke, as did Mrs. Eleanore Moore, educational director of the State Board of Nursing Examiners. Mrs. O. D. Wadkins, who helped to start the first practical nursing school for Negroes in Oklahoma City, was another speaker.

### Nevada Association Meets in Las Vegas

Officers for the coming year were elected at the August state convention of the Nevada Licensed Practical Nurses Association Inc., held in Las Vegas. Mrs. William Hatton of Las Vegas was elected president; Florence Gallagher of Las Vegas, vice president; Clara McLaughlin, Las Vegas, recording secretary; Kathleen Guerin, Sparks, was reelected executive secretary; Mrs. Ethel Warburton, Reno, treasurer. On the board of directors are Mrs. Aimee Lindsay, Reno, and Mrs. Helen Malner and Mrs. Eula Urban, both of Las Vegas.

Convention meetings were devoted to plans for extending and improving practical nursing in Nevada. Motion pictures on medical practices were shown. Dr. Ralph Hemington of Las Vegas and Mrs. Genevieve Sutton, R.N., of Boulder City, past president of the Registered Nurses Association of Nevada were guest speakers.

Delegates were elected to attend the National Federation of Licensed Practical Nurses Convention in Boston.

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# Medical Research

## Describe Three New Insulin Preparations

Three new long-acting insulin preparations, which offer promise in reducing the complexities of insulin administration to diabetics, were described in the 12/27/52 issue of the *Journal of the American Medical Association*.

The new preparations, consisting of insulin mixed with small amounts of zinc, have activity ranges from about 18 to more than 30 hours, according to K. Hallas-Moller, Ph.D.; M. Jersild, M.D.; K. Petersen, M.Sc., and J. Schlichtkrull, M.Sc., of Copenhagen, Denmark.

According to the authors, preliminary studies of 65 patients with severe cases of diabetes have shown "that satisfactory blood sugar control can be obtained in such patients with a single injection of the appropriate one of the three types of zinc insulin."

They reported that the currently available insulin preparations with protracted action, if given in one daily injection, are incapable of providing satisfactory regulation of the blood sugar level in a considerable number of patients with difficult cases of diabetes.

"The results we have attained indicate that these zinc insulin preparations may offer a solution to the problem of providing a single daily injection for such patients," they added.

Zinc insulin was given to the patients daily at 8 a.m. The amounts of insulin varied according to individual reactions.

## Persistent Hoarseness May Be Danger Signal

Hoarseness can be dangerous. Although hoarseness is a common unpleasantry experienced by everyone at one time or another, it can be a danger signal, according to Dr. Robert W. Ard, Hagerstown, Md. When it persists for more than two weeks, it may be more than laryngitis—it may even be cancer.

Hoarseness usually is a temporary voice defect associated with simple upper respiratory infections, Dr. Ard wrote in the current *Today's Health*, published by the American Medical Association.

"However," he added, "such infections aren't the only cause of hoarseness. Other diseases, notably cancer, tuberculosis and syphilis, may give rise to this voice difficulty. Unlike laryngitis, these vicious illnesses are not of brief duration.

Anyone who has hoarseness for more than two weeks should have a thorough medical examination, including a direct examination of the vocal cords, Dr. Ard stressed.

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